

TABLE 1
EXPOSURE POINT CONCENTRATION (mg/kg)
SOUTH AREA SURFACE SOIL*

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark ⁽¹⁾	EPA Ecological Screening Level ⁽²⁾	95% UCL	Statistic Used ⁽³⁾	# of Detects/# of Samples
2-Methylnaphthalene	0.0293	0.501	0.0106	---	---	0.0784	97.5% Chebyshev	22 of 83
4,4'-DDD	0.0007894	0.0243	0.00264	---	---	0.0029	97.5% Chebyshev	5 of 83
4,4'-DDE	0.0019	0.0693	0.000428	---	---	0.0074	97.5% Chebyshev	17 of 83
4,4'-DDT	0.0038	0.0625	0.000281	---	0.021 (m)	0.014	99% Chebyshev	37 of 83
Acenaphthene	0.0595	1.69	0.0113	20 (p)	---	0.197	97.5% Chebyshev	26 of 83
Acenaphthylene	0.0382	0.935	0.0184	---	---	0.113	97.5% Chebyshev	19 of 83
Aluminum	5335	15200	414	---	---	5946	95% Student's-t	83 of 83
Anthracene	0.0961	2.46	0.0112	---	---	0.297	97.5% Chebyshev	37 of 83
Antimony	1.118	5.14	0.2	5 (p)	0.27 (m)	1.959	97.5% Chebyshev	72 of 83
Aroclor-1254	0.137	7.98	0.00334	---	---	0.726	97.5% Chebyshev	13 of 85
Arsenic	3.735	24.3	0.26	18 (p)	18 (p)	4.535	95% Approx. Gamma	71 of 83
Barium	345.2	2180	18.6	330 (i)	330 (i)	415.1	95% H-UCL	83 of 83
Benzo(a)anthracene	0.345	5.02	0.0286	---	---	1.211	99% Chebyshev	30 of 83
Benzo(a)pyrene	0.457	4.57	0.0103	---	---	1.457	99% Chebyshev	65 of 83
Benzo(b)fluoranthene	0.582	5.42	0.0408	---	---	1.638	95% H-UCL	61 of 83
Benzo(g,h,i)perylene	0.324	4.24	0.00989	---	---	1.095	99% Chebyshev	51 of 83
Benzo(k)fluoranthene	0.24	4.25	0.0195	---	---	0.651	97.5% Chebyshev	33 of 83
Beryllium	0.408	4.6	0.014	10 (p)	21 (m)	0.487	95% Approx. Gamma	82 of 83
Boron	4.662	54.4	2.43	0.5 (p)	---	9.663	97.5% Chebyshev	34 of 83
Butyl Benzyl Phthalate	0.0187	0.297	0.0129	---	---	0.0373	95% Chebyshev	6 of 83
Cadmium	0.464	9.71	0.023	32 (p)	0.36 (m)	1.71	99% Chebyshev	50 of 83
Carbazole	0.0612	1.54	0.0104	---	---	0.193	97.5% Chebyshev	29 of 83
Chromium	16.08	136	3.37	0.4 (i)	26 (a)	17.45	95% H-UCL	83 of 83
Chrysene	0.409	4.87	0.00932	---	---	1.322	99% Chebyshev	56 of 83
Cobalt	3.705	16	0.049	13 (p)	13 (p)	4.781	95% Chebyshev	82 of 83
Copper	27.98	216	1.55	61 (i)	28 (a)	32.45	95% H-UCL	83 of 83
Dibenz(a,h)anthracene	0.155	1.64	0.0639	---	---	0.363	97.5% Chebyshev	36 of 83
Dibenzofuran	0.0378	0.821	0.0167	---	---	0.111	97.5% Chebyshev	17 of 83
Dieldrin	0.000997	0.0205	0.000243	---	0.0049 (m)	0.003	97.5% Chebyshev	21 of 83
Di-n-butyl Phthalate	0.048	0.753	0.0368	200 (p)	---	0.0967	95% Chebyshev	9 of 83
Endosulfan Sulfate	0.002	0.0713	0.000456	---	---	0.0077	97.5% Chebyshev	17 of 83
Endrin Aldehyde	0.0023	0.0738	0.000497	---	---	0.0084	97.5% Chebyshev	22 of 83
Endrin Ketone	0.0016	0.02	0.000469	---	---	0.004	97.5% Chebyshev	18 of 83
Fluoranthene	0.799	14.2	0.0133	---	---	2.656	95% H-UCL	59 of 83
Fluorene	0.0515	1.11	0.00945	30 (i)	---	0.155	97.5% Chebyshev	28 of 83
gamma-Chlordane	0.00082679	0.0156	0.00071	---	---	0.0025	97.5% Chebyshev	8 of 83
Indeno(1,2,3-cd)pyrene	0.47	6.49	0.0634	---	---	1.115	97.5% Chebyshev	63 of 83
Iron	16285	77100	3450	---	---	17845	95% H-UCL	83 of 83
Lead	69.61	643	2.82	120 (p)	11 (a)	84.5	95% H-UCL	83 of 83
Lithium	7.856	28	0.65	2 (p)	---	9.055	95% Approx. Gamma	83 of 83
Manganese	257.4	892	59.3	500 (p)	220 (p)	281.1	95% Student's-t	83 of 83
Mercury	0.0227	0.66	0.0032	0.1 (i)	---	0.0254	95% H-UCL	37 of 83
Molybdenum	1.306	8.42	0.098	2 (p)	---	1.645	95% Approx. Gamma	71 of 83
Nickel	11.64	36.7	2.84	30 (p)	38 (p)	12.54	95% Approx. Gamma	83 of 83
Phenanthrene	0.512	12.6	0.0139	---	---	2.198	99% Chebyshev	57 of 83
Pyrene	0.533	8.47	0.0121	---	---	1.366	95% H-UCL	57 of 83
Strontium	70.61	527	16.5	---	---	101.2	95% Chebyshev	83 of 83
Tin	0.611	4.95	0.52	50 (p)	---	0.991	95% Chebyshev	23 of 83
Titanium	29.8	645	11.5	---	---	63	95% Chebyshev	83 of 83
Vanadium	13.76	45.6	5.42	2 (p)	7.8 (a)	14.84	95% Approx. Gamma	83 of 83
Zinc	601.2	4770	12.3	120 (i)	46 (a)	727.7	95% Approx. Gamma	83 of 83
LPAH	0.7866	19.296	0.07485	---	29 (i)	3.0384		
HPAH	4.314	59.17	0.27111	---	1.1 (m)	12.874		
Total PAH	5.1006	78.466	0.34596	---	---	15.9124		

Notes:

* Surface soil was collected from 0 to 0.5 ft. below ground surface.

+ Chemicals of interest are any chemical measured in at least one sample at a frequency of detection greater than five percent.

(1) - From Table 3-4 of TCEQ, 2006.

(2) - From www.epa.gov/ecotox/ecossl.

(3) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

(a) - avian

(i) - soil invertebrate

(m) - mammal

(p) - plant

TABLE 2
EXPOSURE POINT CONCENTRATION (mg/kg)
SOUTH AREA SOIL*

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark ⁽¹⁾	EPA Ecological Screening Level ⁽²⁾	95% UCL	Statistic Used ⁽³⁾	# of Detects/# of Samples
1,3,5-Trimethylbenzene	0.099	4.36	0.000267	---	---	0.532	97.5% Chebyshev	9 of 83
2-Butanone	0.00412	0.0226	0.000992	---	---	0.00925	97.5% Chebyshev	4 of 83
2-Hexanone	0.00406	0.0207	0.00109	---	---	0.0164	97.5% Chebyshev	8 of 83
2-Methylnaphthalene	0.0698	7.21	0.0106	---	---	0.341	97.5% Chebyshev	32 of 166
4,4'-DDD	0.00766	1.12	0.000369	---	---	0.0498	97.5% Chebyshev	21 of 166
4,4'-DDE	0.0017	0.0693	0.000428	---	---	0.0054	97.5% Chebyshev	22 of 166
4,4'-DDT	0.0037	0.113	0.000281	---	0.021 (m)	0.0125	99% Chebyshev	68 of 166
Acenaphthene	0.0419	1.69	0.0113	20 (p)	---	0.115	97.5% Chebyshev	35 of 166
Acenaphthylene	0.042	1.2	0.0172	---	---	0.114	97.5% Chebyshev	37 of 166
Acetone	0.0145	0.16	0.031	---	---	0.0491	99% Chebyshev	10 of 83
Aluminum	6452	15700	414	---	---	6914	95% Student's-t	166 of 166
Anthracene	0.0874	2.46	0.0112	---	---	0.21	97.5% Chebyshev	65 of 166
Antimony	1.023	5.51	0.2	5 (p)	0.27 (m)	1.576	97.5% Chebyshev	144 of 166
Aroclor-1254	0.205	11.5	0.00334	---	---	0.74	97.5% Chebyshev	25 of 170
Arsenic	3.331	24.3	0.23	18 (p)	18 (p)	4.916	97.5% Chebyshev	139 of 166
Barium	237.4	2180	18.6	330 (i)	330 (i)	330.4	95% Chebyshev	166 of 166
Benzene	0.004	0.0221	0.000339	---	---	0.0065	97.5% Chebyshev	72 of 83
Benzo(a)anthracene	0.268	5.02	0.0118	---	---	0.859	99% Chebyshev	44 of 166
Benzo(a)pyrene	0.347	4.88	0.00999	---	---	1.008	99% Chebyshev	113 of 166
Benzo(b)fluoranthene	0.466	5.97	0.0408	---	---	1.256	99% Chebyshev	102 of 166
Benzo(g,h,i)perylene	0.251	4.24	0.00989	---	---	0.545	97.5% Chebyshev	81 of 166
Benzo(k)fluoranthene	0.157	4.25	0.0158	---	---	0.378	97.5% Chebyshev	45 of 166
Beryllium	0.465	4.6	0.014	10 (p)	21 (m)	0.668	97.5% Chebyshev	165 of 166
Boron	4.811	54.4	2.43	0.5 (p)	---	7.387	97.5% Chebyshev	72 of 166
Butyl Benzyl Phthalate	0.0203	0.617	0.0129	---	---	0.0392	95% Chebyshev	10 of 166
Cadmium	0.335	9.71	0.023	32 (p)	0.36 (m)	0.751	97.5% Chebyshev	93 of 166
Carbazole	0.0459	1.54	0.0104	---	---	0.118	97.5% Chebyshev	42 of 166
Carbon Disulfide	0.0012	0.028	0.000987	---	---	0.004	97.5% Chebyshev	13 of 83
Chromium	13.53	136	2.03	0.4 (i)	26 (a)	17.75	95% Chebyshev	166 of 166
Chrysene	0.327	4.87	0.00901	---	---	0.938	99% Chebyshev	93 of 166
Cobalt	4.144	16	0.049	13 (p)	13 (p)	4.407	95% Student's-t	165 of 166
Copper	24.26	487	0.13	61 (i)	28 (a)	46.92	97.5% Chebyshev	164 of 166
Cyclohexane	0.266	21.7	0.000626	---	---	1.898	97.5% Chebyshev	47 of 83
Dibenz(a,h)anthracene	0.113	1.64	0.0619	---	---	0.236	97.5% Chebyshev	56 of 166
Dibenzofuran	0.0309	0.821	0.0167	---	---	0.0709	97.5% Chebyshev	23 of 166
Dieldrin	0.00090075	0.0205	0.000243	---	0.0049 (m)	0.0021	97.5% Chebyshev	33 of 166
Di-n-butyl Phthalate	0.0391	0.753	0.0311	200 (p)	---	0.0657	95% Chebyshev	11 of 166
Endosulfan Sulfate	0.0013	0.0713	0.0713	---	---	0.0042	97.5% Chebyshev	21 of 166
Endrin Aldehyde	0.0019	0.0738	0.000497	---	---	0.0055	97.5% Chebyshev	31 of 166
Endrin Ketone	0.0013	0.02	0.000469	---	---	0.0029	97.5% Chebyshev	25 of 166
Ethylbenzene	0.0038	0.105	0.000654	---	---	0.0127	97.5% Chebyshev	47 of 83
Fluoranthene	0.594	14.2	0.0133	---	---	1.886	99% Chebyshev	96 of 166
Fluorene	0.0442	1.11	0.00945	30 (i)	---	0.107	97.5% Chebyshev	41 of 166
gamma-Chlordane	0.00069043	0.0156	0.00071	---	---	0.0017	97.5% Chebyshev	12 of 166
Indeno(1,2,3-cd)pyrene	0.368	6.49	0.0574	---	---	0.761	97.5% Chebyshev	104 of 166
Iron	14277	77100	2410	---	---	17453	95% Chebyshev	166 of 166
Isopropylbenzene (cumene)	0.831	64.9	0.000318	---	---	8.618	99% Chebyshev	16 of 83
Lead	53.52	702	2.48	120 (p)	11 (a)	104	97.5% Chebyshev	166 of 166
Lithium	10.03	28.6	0.65	2 (p)	---	12.17	95% Chebyshev	166 of 166
m,p-Xylene	0.0347	2.56	0.000558	---	---	0.227	97.5% Chebyshev	53 of 83
Manganese	261.2	892	59.3	500 (p)	220 (p)	277.5	95% Student's-t	166 of 166
Mercury	0.0262	0.85	0.0026	0.1 (i)	---	0.0718	97.5% Chebyshev	73 of 166
Methylcyclohexane	0.0369	2.73	0.000223	---	---	0.242	97.5% Chebyshev	57 of 83
Molybdenum	0.89	10.4	0.088	2 (p)	---	1.61	97.5% Chebyshev	118 of 166
Naphthalene	0.323	19.2	0.00482	---	---	2.775	99% Chebyshev	8 of 83
Nickel	11.74	36.7	2.7	30 (p)	38 (p)	12.37	95% Student's-t	166 of 166
n-Propylbenzene	0.0237	1.8	0.00023	---	---	0.159	97.5% Chebyshev	14 of 83
o-Xylene	0.0132	0.84	0.000223	---	---	0.077	97.5% Chebyshev	32 of 83
Phenanthrene	0.401	12.6	0.0136	---	---	1.349	99% Chebyshev	95 of 166
Pyrene	0.432	8.47	0.0121	---	---	1.29	99% Chebyshev	98 of 166
Strontium	75.61	591	16.5	---	---	100.6	95% Chebyshev	166 of 166
Tin	0.616	6.48	0.52	50 (p)	---	0.91	95% Chebyshev	40 of 166
Titanium	25.77	645	4.02	---	---	32.21	95% Student's-t	166 of 166
Toluene	0.00574	0.0192	0.000721	---	---	0.0137	97.5% Chebyshev	69 of 83
Vanadium	14.4	45.6	4.73	2 (p)	7.8 (a)	15.17	95% Approx. Gamma	166 of 166
Xylene (total)	0.0479	3.4	0.000777	---	---	0.304	97.5% Chebyshev	53 of 83
Zinc	433.8	7650	6.17	120 (i)	46 (a)	815.2	97.5% Chebyshev	166 of 166
HPAH	1.0093	45.47	0.07817	---	29 (i)	5.011		
HPAH	3.323	60.03	0.24199	---	1.1 (m)	9.157		
Total PAH	4.3323	105.5	0.32016	---	---	14.168		

Notes:

* Soil was collected from 0 to 4 ft. below ground surface.

* Chemicals of interest are any chemical measured in at least one sample at a frequency of detection greater than five percent.

(1) - From Table 3-4 of TCEQ, 2006.

(2) - From www.epa.gov/ecotox/ecossl.

(3) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

(a) - avian

(i) - soil invertebrate

(m) - mammal

(p) - plant

**TABLE 3
EXPOSURE POINT CONCENTRATION (mg/kg)
NORTH AREA SURFACE SOIL***

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark ⁽¹⁾	EPA Ecological Screening Level ⁽²⁾	95% UCL	Statistic Used ⁽³⁾	# of Detects/# of Samples
2-Methylnaphthalene	0.0123	0.053	0.01	---	---	0.0275	95% Chebyshev	3 of 18
4,4'-DDE	0.0011	0.0149	0.00216	---	---	0.0093	99% Chebyshev	2 of 18
4,4'-DDT	0.0012	0.0108	0.000597	---	0.021 (m)	0.0073	99% Chebyshev	7 of 18
Acenaphthene	0.0161	0.157	0.021	20 (p)	---	0.0528	95% Chebyshev	2 of 18
Acenaphthylene	0.0099	0.0555	0.0555	---	---	0.0234	95% Chebyshev	1 of 18
Aluminum	10673	16800	1810	---	---	12185	95% Student's-t	18 of 18
Anthracene	0.0257	0.264	0.00887	---	---	0.168	99% Chebyshev	4 of 18
Antimony	1.744	8.09	1.66	5 (p)	0.27 (m)	6.777	99% Chebyshev	9 of 18
Aroclor-1254	0.0037	0.0122	0.0122	---	---	0.0077	95% Chebyshev	1 of 18
Arsenic	2.522	5.69	0.54	18 (p)	18 (p)	2.999	95% Student's-t	17 of 18
Barium	145.2	476	46.1	330 (i)	330 (i)	264.2	95% Chebyshev	18 of 18
Benzo(a)anthracene	0.0715	1.18	1.18	---	---	0.72	99% Chebyshev	1 of 18
Benzo(a)pyrene	0.114	1.42	0.0135	---	---	0.888	99% Chebyshev	7 of 18
Benzo(b)fluoranthene	0.146	1.62	0.0487	---	---	0.352	95% Adjusted Gamma	8 of 18
Benzo(g,h,i)perylene	0.132	1.28	0.0237	---	---	0.842	99% Chebyshev	10 of 18
Benzo(k)fluoranthene	0.0689	0.799	0.011	---	---	0.505	99% Chebyshev	4 of 18
Beryllium	0.708	2.88	0.066	10 (p)	21 (m)	2.125	99% Chebyshev	17 of 18
Bis(2-ethylhexyl)phthalate	0.0462	0.239	0.0122	---	---	0.0978	95% Chebyshev	6 of 18
Boron	8.028	39.2	3.15	0.5 (p)	---	13.49	95% Approx. Gamma	13 of 18
Butyl Benzyl Phthalate	0.016	0.151	0.151	---	---	0.0514	95% Chebyshev	1 of 18
Cadmium	0.207	0.8	0.28	32 (p)	0.36 (m)	0.799	99% Chebyshev	8 of 18
Carbazole	0.0153	0.128	0.013	---	---	0.045	95% Chebyshev	4 of 18
Chromium	20.26	128	7.9	0.4 (i)	26 (a)	48.59	95% Student's-t	18 of 18
Chrysene	0.102	1.3	0.011	---	---	0.812	99% Chebyshev	7 of 18
Cobalt	5.789	7.87	2.81	13 (p)	13 (p)	6.406	95% Student's-t	18 of 18
Copper	24.13	200	5.9	61 (i)	28 (a)	70.01	95% Chebyshev	18 of 18
Dibenz(a,h)anthracene	0.0471	0.404	0.045	---	---	0.284	99% Chebyshev	4 of 18
Dibenzofuran	0.0129	0.0862	0.0862	---	---	0.0336	95% Chebyshev	1 of 18
Dieldrin	0.0004866	0.00545	0.00545	---	0.0049 (m)	0.0034	99% Chebyshev	1 of 18
Diethyl Phthalate	0.0113	0.011	0.011	100 (p)	---	0.0215	95% Chebyshev	1 of 18
Di-n-butyl Phthalate	0.0179	0.01	0.01	200 (p)	---	0.0357	95% Chebyshev	1 of 18
Di-n-octyl Phthalate	0.0144	0.123	0.0154	---	---	0.0428	95% Chebyshev	2 of 18
Endrin	0.000304	0.00149	0.00149	---	---	0.000759	95% Chebyshev	1 of 18
Endrin Ketone	0.000874	0.00966	0.00966	---	---	0.0031	95% Chebyshev	1 of 18
Fluoranthene	0.159	2.19	0.0214	---	---	1.358	99% Chebyshev	6 of 18
Fluorene	0.0163	0.141	0.017	30 (i)	---	0.0496	95% Chebyshev	3 of 18
Indeno(1,2,3-cd)pyrene	0.151	1.51	0.02	---	---	0.969	99% Chebyshev	9 of 18
Iron	19477	102000	8450	---	---	41127	95% Chebyshev	18 of 18
Lead	57.7	471	8.22	120 (p)	11 (a)	318.3	99% Chebyshev	18 of 18
Lithium	16.57	26.6	2.59	2 (p)	---	18.68	95% Student's-t	18 of 18
Manganese	369.5	1210	82.3	500 (p)	220 (p)	473.3	95% Approx. Gamma	18 of 18
Mercury	0.0126	0.064	0.006	0.1 (i)	---	0.0218	95% Approx. Gamma	8 of 18
Molybdenum	0.949	10.7	0.085	2 (p)	---	6.812	99% Chebyshev	11 of 18
Nickel	17.04	51.7	11.7	30 (p)	38 (p)	20.76	95% Student's-t	18 of 18
Phenanthrene	0.109	1.34	0.018	---	---	0.845	99% Chebyshev	7 of 18
Pyrene	0.147	1.87	0.0149	---	---	1.169	99% Chebyshev	8 of 18
Silver	0.0543	0.41	0.092	2 (p)	---	0.148	95% Chebyshev	2 of 18
Strontium	57.32	93.6	26.6	---	---	65.4	95% Student's-t	18 of 18
Thallium	0.109	0.63	0.63	1 (p)	---	0.273	95% Chebyshev	1 of 18
Tin	0.625	3.67	0.68	50 (p)	---	1.494	95% Chebyshev	4 of 18
Titanium	20.67	55.9	3.41	---	---	26.26	95% Approx. Gamma	18 of 18
Vanadium	19.66	45.8	7.85	2 (p)	7.8 (a)	23.4	95% Student's-t	18 of 18
Zinc	418.4	5640	29.5	120 (i)	46 (a)	3485	99% Chebyshev	18 of 18
LPAH	0.1893	2.0105	0.13037	---	29 (i)	1.1663		
HPAH	1.1385	13.573	1.3892	---	1.1 (m)	7.899		
Total PAH	1.3278	15.5835	1.51957	---	---	9.0653		

Notes:

* Surface soil was collected from 0 to 0.5 ft. below ground surface.

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(1) - From Table 3-4 of TCEQ, 2006.

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TABLE 4
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Chemicals of Interest**	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark ⁽¹⁾	EPA Ecological Screening Level ⁽²⁾	95% UCL	Statistic Used ⁽³⁾	# of Detects/# of Samples
1,1-Dichloroethane	0.0286	0.518	0.00161	---	---	0.299	99% Chebyshev	3 of 19
1,1-Dichloroethene	0.0179	0.313	0.00178	---	---	0.181	99% Chebyshev	2 of 19
1,2-Dichloroethane	0.0106	0.177	0.00231	---	---	0.103	99% Chebyshev	4 of 19
2-Butanone	0.0029	0.208	0.0017	---	---	0.121	99% Chebyshev	11 of 19
2-Methylnaphthalene	0.0103	0.053	0.01	---	---	0.0198	95% Chebyshev	4 of 36
4,4'-DDE	0.0007	0.0149	0.00216	---	---	0.0024	95% Chebyshev	2 of 36
4,4'-DDT	0.000704	0.0108	0.000597	---	0.021 (m)	0.0038	99% Chebyshev	7 of 36
Acenaphthene	0.0142	0.157	0.021	20 (p)	---	0.036	95% Chebyshev	4 of 36
Aluminum	11971	18300	1810	---	---	13092	95% Student's-t	36 of 36
Anthracene	0.0215	0.264	0.00887	---	---	0.107	99% Chebyshev	6 of 36
Antimony	1.416	8.09	1.66	5 (p)	0.27 (m)	4.366	99% Chebyshev	16 of 36
Aroclor-1254	0.0056	0.0938	0.0122	---	---	0.0168	95% Chebyshev	2 of 36
Arsenic	2.573	5.69	0.54	18 (p)	18 (p)	2.959	95% Student's-t	32 of 36
Barium	142.1	362	46.1	330 (i)	330 (i)	211.7	95% Student's-t	36 of 36
Benzene	0.0027	0.00632	0.00138	---	---	0.0034	95% Student's-t	12 of 19
Benzo(a)anthracene	0.068	1.18	0.0383	---	---	0.464	99% Chebyshev	4 of 36
Benzo(a)pyrene	0.0922	1.42	0.0135	---	---	0.554	99% Chebyshev	10 of 36
Benzo(b)fluoranthene	0.12	1.62	0.0487	---	---	0.649	99% Chebyshev	11 of 36
Benzo(g,h,i)perylene	0.0961	1.28	0.0237	---	---	0.494	99% Chebyshev	14 of 36
Benzo(k)fluoranthene	0.0601	0.799	0.068	---	---	0.341	99% Chebyshev	6 of 36
Beryllium	0.752	2.88	0.066	10 (p)	21 (m)	1.087	95% Chebyshev	35 of 36
Bis(2-ethylhexyl)phthalate	0.0428	0.239	0.0122	---	---	0.0753	95% Chebyshev	11 of 36
Boron	7.576	39.2	3.14	0.5 (p)	---	20.55	99% Chebyshev	26 of 36
Bromoform	0.0023	0.018	0.011	---	---	0.013	99% Chebyshev	2 of 19
Butyl Benzyl Phthalate	0.0125	0.151	0.054	---	---	0.031	95% Chebyshev	2 of 36
Cadmium	0.193	0.8	0.28	32 (p)	0.36 (m)	0.59	99% Chebyshev	15 of 36
Carbazole	0.0143	0.128	0.0108	---	---	0.0323	95% Chebyshev	7 of 36
Carbon Disulfide	0.0028	0.0284	0.00757	---	---	0.018	99% Chebyshev	3 of 19
Chromium	17.17	128	7.76	0.4 (i)	26 (a)	22.69	95% Student's-t	36 of 36
Chrysene	0.0885	1.3	0.0104	---	---	0.529	99% Chebyshev	11 of 36
cis-1,2-Dichloroethene	0.0541	0.999	0.0195	---	---	0.577	99% Chebyshev	2 of 19
Cobalt	6.318	10.3	2.81	13 (p)	13 (p)	6.808	95% Student's-t	36 of 36
Copper	18.7	200	4.59	61 (i)	28 (a)	41.87	95% Student's-t	36 of 36
Cyclohexane	0.0056	0.00185	0.000981	---	---	0.00185	Maximum*	5 of 19
Dibenz(a,h)anthracene	0.0384	0.404	0.045	---	---	0.177	99% Chebyshev	7 of 36
Dibenzofuran	0.0099	0.0862	0.015	---	---	0.0205	95% Chebyshev	2 of 36
Diethyl Phthalate	0.0097	0.011	0.00992	100 (p)	---	0.0118	95% Student's-t	2 of 36
Di-n-butyl Phthalate	0.0155	0.015	0.01	200 (p)	---	0.0248	95% Chebyshev	2 of 36
Di-n-octyl Phthalate	0.0115	0.123	0.0154	---	---	0.0264	95% Chebyshev	3 of 36
Ethylbenzene	0.0016	0.00502	0.00114	---	---	0.00502	Maximum*	5 of 19
Fluoranthene	0.146	2.19	0.0214	---	---	0.923	99% Chebyshev	9 of 36
Fluorene	0.0112	0.141	0.017	30 (i)	---	0.0282	95% Chebyshev	4 of 36
Indeno(1,2,3-cd)pyrene	0.133	1.51	0.02	---	---	0.577	99% Chebyshev	13 of 36
Iron	17531	102000	7120	---	---	21765	95% Student's-t	36 of 36
Lead	37.8	471	5.88	120 (p)	11 (a)	96.63	95% Chebyshev	36 of 36
Lithium	18.84	32.2	2.59	2 (p)	---	20.51	95% Student's-t	36 of 36
m,p-Xylene	0.002	0.00139	0.00132	---	---	0.00139	Maximum*	2 of 19
Manganese	347	1210	82.3	500 (p)	220 (p)	405.2	95% Approx. Gamma	36 of 36
Mercury	0.0094	0.064	0.0034	0.1 (i)	---	0.03	99% Chebyshev	13 of 36
Methylcyclohexane	0.0024	0.00278	0.0015	---	---	0.00278	Maximum*	6 of 19
Molybdenum	0.586	10.7	0.085	2 (p)	---	3.551	99% Chebyshev	21 of 36
Naphthalene	0.0236	0.148	0.0013	---	---	0.102	99% Chebyshev	6 of 19
Nickel	17.17	51.7	9.74	30 (p)	38 (p)	18.79	95% Student's-t	36 of 36
Phenanthrene	0.0998	1.34	0.018	---	---	0.595	99% Chebyshev	10 of 36
Pyrene	0.143	1.97	0.0149	---	---	0.879	99% Chebyshev	11 of 36
Silver	0.0473	0.41	0.092	2 (p)	---	0.103	95% Student's-t	3 of 36
Strontium	56.15	96.2	22.1	---	---	62.05	95% Student's-t	36 of 36
Tetrachloroethene	0.0127	0.223	0.00135	---	---	0.129	99% Chebyshev	3 of 19
Tin	0.47	3.67	0.68	50 (p)	---	0.926	95% Chebyshev	5 of 36
Titanium	20.83	57	3.41	---	---	24.83	95% Student's-t	36 of 36
Toluene	0.0046	0.0122	0.00134	200 (p)	---	0.0122	Maximum*	8 of 19
Vanadium	20.54	45.8	7.85	2 (p)	7.8 (a)	22.9	95% Student's-t	36 of 36
Xylene (total)	0.119	1.76	0.00139	---	---	0.372	95% Adjusted Gamma	8 of 19
Zinc	242.5	5640	21.1	120 (i)	46 (a)	1784	99% Chebyshev	36 of 36
LPAH	0.1806	2.103	0.07617	---	29 (i)	0.888		
HPAH	0.9853	13.673	0.3039	---	1.1 (m)	5.587		
Total PAH	1.1659	15.776	0.38007	---	---	6.475		

Notes:

* Recommended UCL exceeds maximum observation, so the maximum measured concentration was used as the EPC.

+ Soil was collected from 0 to 4 ft. below ground surface.

** Chemicals of interest are any chemical measured in at least one sample at a frequency of detection greater than five percent.

(1) - From Table 3-4 of TCEQ, 2006.

(2) - From www.epa.gov/ecotox/ecossl.

(3) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

(a) - avian

(i) - soil invertebrate

(m) - mammal

(p) - plant

TABLE 5
EXPOSURE POINT CONCENTRATION (mg/kg)
BACKGROUND SOIL+

Chemicals of Interest**	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark ⁽¹⁾	EPA Ecological Screening Level ⁽²⁾	95% UCL	Statistic Used ⁽³⁾	# of Detects/# of Samples
Antimony	0.953	2.19	0.25	5 (p)	0.27 (m)	2.19	Maximum*	5 of 10
Arsenic	3.438	5.9	0.24	18 (p)	18 (p)	4.477	95% Student's-t	10 of 10
Barium	333.1	1130	150	330 (i)	330 (i)	502.3	95% Approx. Gamma	10 of 10
Benzo(a)anthracene	0.0116	0.082	0.082	---	---	0.0457	95% Chebyshev	1 of 10
Benzo(a)pyrene	0.0122	0.076	0.076	---	---	0.0431	95% Chebyshev	1 of 10
Benzo(b)fluoranthene	0.00941	0.057	0.057	---	---	0.0325	95% Chebyshev	1 of 10
Benzo(g,h,i)perylene	0.0241	0.083	0.083	---	---	0.0527	95% Chebyshev	1 of 10
Benzo(k)fluoranthene	0.0158	0.106	0.106	---	---	0.0595	95% Chebyshev	1 of 10
Cadmium	0.0311	0.11	0.041	32 (p)	0.36 (m)	0.11	Maximum*	3 of 10
Carbazole	0.00512	0.011	0.011	---	---	0.00636	95% Student's-t	1 of 10
Chromium	15.2	20.1	10.7	0.4 (i)	26 (a)	16.95	95% Student's-t	10 of 10
Chrysene	0.0145	0.083	0.083	---	---	0.0477	95% Chebyshev	1 of 10
Copper	12.12	19.3	7.68	61 (i)	28 (a)	14.41	95% Student's-t	10 of 10
Fluoranthene	0.0208	0.156	0.156	---	---	0.156	Maximum*	1 of 10
Indeno(1,2,3-cd)pyrene	0.0551	0.417	0.417	---	---	0.417	Maximum*	1 of 10
Lead	13.43	15.2	11	120 (p)	11 (a)	14.33	95% Student's-t	10 of 10
Lithium	21.14	32.5	14.4	2 (p)	---	24.13	95% Student's-t	10 of 10
Manganese	377.4	551	284	500 (p)	220 (p)	431.8	95% Student's-t	10 of 10
Mercury	0.0213	0.03	0.015	0.1 (i)	---	0.0241	95% Student's-t	10 of 10
Molybdenum	0.522	0.68	0.42	2 (p)	---	0.565	95% Student's-t	10 of 10
Phenanthrene	0.0167	0.137	0.137	---	---	0.137	Maximum*	1 of 10
Pyrene	0.0218	0.127	0.127	---	---	0.0728	95% Chebyshev	1 of 10
Zinc	247	969	36.6	120 (i)	46 (a)	969	Maximum*	10 of 10
LPAH	0.0167	0.137	0.137	---	29 (i)	0.137		
HPAH	0.18531	1.187	1.187	---	1.1 (m)	0.927		
Total PAH	0.20201	1.324	1.324	---	---	1.064		

Notes:

* Recommended UCL exceeds maximum observation, so the maximum measured concentration was used as the EPC.

+ Soil was collected from 0 to 4 ft. below ground surface.

** Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-4 of TCEQ, 2006.

(2) - From www.epa.gov/ecotox/ecossl.

(3) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

(a) - avian

(i) - soil invertebrate

(m) - mammal

(p) - plant

TABLE 6
EXPOSURE POINT CONCENTRATION (mg/kg)
INTRACOASTAL WATERWAY SEDIMENT

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Marine Sediment PCL ⁽¹⁾	TCEQ Second Effects Level for Sediment ⁽²⁾	Midpoint of TCEQ PCL and SEL ⁽³⁾	EPA EcoTox Threshold ⁽⁴⁾	95% UCL	Statistic Used ⁽⁵⁾	# of Detects/# of Samples
1,2-Dichloroethane	4.10E-04	3.02E-03	3.02E-03	4.30E+00	2.58E+01	1.51E+01	---	1.10E-03	95% Chebyshev	1 of 16
1,2-Diphenylhydrazine/azobenzene	7.30E-03	3.17E-02	3.17E-02	---	---	---	---	1.03E-02	95% Student's-t	1 of 16
2-Methylnaphthalene	8.30E-03	1.88E-02	1.88E-02	7.00E-02	6.70E-01	3.70E-01	---	9.60E-03	95% Student's-t	1 of 16
3,3'-Dichlorobenzidine	4.08E-02	1.51E-01	1.51E-01	---	---	---	---	5.38E-02	95% Student's-t	1 of 16
4,4'-DDT	4.11E-04	3.32E-03	4.81E-04	1.19E-03	6.29E-02	3.20E-02	1.60E-03	2.30E-03	99% Chebyshev	4 of 17
4,6-Dinitro-2-methylphenol	1.70E-02	6.27E-02	6.27E-02	---	---	---	---	2.24E-02	95% Student's-t	1 of 16
Acenaphthene	1.16E-02	6.31E-02	2.39E-02	1.60E-02	5.00E-01	2.58E-01	1.10E+00	2.73E-02	95% Chebyshev	2 of 16
Aluminum	6.85E+03	1.25E+04	3.90E+03	---	---	---	---	7.88E+03	95% Student's-t	16 of 16
Anthracene	2.01E-02	7.53E-02	2.36E-02	8.53E-02	1.10E+00	5.93E-01	---	4.24E-02	95% Chebyshev	6 of 16
Antimony	2.25E+00	8.14E+00	7.40E-01	---	---	---	---	2.99E+00	95% Approx. Gamma	16 of 16
Arsenic	4.03E+00	7.62E+00	2.41E+00	8.20E+00	7.00E+01	3.91E+01	8.20E+00	4.64E+00	95% Student's-t	16 of 16
Atrazine (Aatrex)	1.79E-02	8.14E-02	8.14E-02	---	---	---	---	2.54E-02	95% Student's-t	1 of 16
Barium	2.15E+02	3.77E+02	1.16E+02	---	---	---	---	2.43E+02	95% Approx. Gamma	16 of 16
Benzo(a)anthracene	4.54E-02	3.95E-01	6.75E-02	2.61E-01	1.60E+00	9.31E-01	---	3.01E-01	99% Chebyshev	3 of 16
Benzo(a)pyrene	6.61E-02	4.45E-01	5.25E-02	4.30E-01	1.60E+00	1.02E+00	4.30E-01	3.52E-01	99% Chebyshev	6 of 16
Benzo(b)fluoranthene	1.00E-01	6.11E-01	3.24E-02	---	---	---	---	4.91E-01	99% Chebyshev	9 of 16
Benzo(g,h,i)perylene	6.61E-02	4.42E-01	1.73E-02	---	---	---	---	3.57E-01	99% Chebyshev	7 of 16
Benzo(k)fluoranthene	5.89E-02	3.18E-01	4.74E-02	---	---	---	---	2.71E-01	99% Chebyshev	6 of 16
Beryllium	4.63E-01	8.20E-01	2.90E-01	---	---	---	---	5.28E-01	95% Student's-t	16 of 16
Boron	1.20E+01	2.72E+01	1.25E+01	---	---	---	---	2.72E+01	Maximum*	10 of 16
Butyl Benzyl Phthalate	2.08E-02	2.02E-01	2.02E-01	---	---	---	1.10E+01	7.35E-02	95% Chebyshev	1 of 16
Carbazole	1.51E-02	8.61E-02	1.95E-02	---	---	---	---	3.84E-02	95% Chebyshev	3 of 16
Chloroform	9.02E-04	5.27E-03	5.04E-03	4.30E+00	2.58E+01	1.51E+01	---	5.00E-03	99% Chebyshev	2 of 16
Chromium	9.21E+00	1.44E+01	5.01E+00	8.10E+01	3.70E+02	2.26E+02	8.10E+01	1.04E+01	95% Student's-t	16 of 16
Chrysene	7.74E-02	4.75E-01	1.37E-02	3.84E-01	2.80E+00	1.59E+00	---	1.53E-01	95% Approx. Gamma	10 of 16
Cobalt	4.39E+00	7.18E+00	3.05E+00	---	---	---	---	4.88E+00	95% Student's-t	16 of 16
Copper	7.11E+00	1.26E+01	3.28E+00	3.40E+01	2.70E+02	1.52E+02	3.40E+01	8.43E+00	95% Student's-t	16 of 16
Cyclohexane	2.30E-03	1.92E-03	1.92E-03	---	---	---	---	2.90E-03	95% Approx. Gamma	1 of 16
Dibenz(a,h)anthracene	4.35E-02	2.35E-01	5.11E-02	6.34E-02	2.60E-01	1.62E-01	---	2.05E-01	99% Chebyshev	6 of 16
Dibenzofuran	1.23E-02	3.05E-02	2.68E-02	---	---	---	2.00E+00	1.52E-02	95% Student's-t	2 of 16
Diethyl Phthalate	1.35E-02	3.89E-02	3.89E-02	---	---	---	6.30E-01	1.66E-02	95% Student's-t	1 of 16
Di-n-octyl Phthalate	1.80E-02	1.92E-01	1.47E-02	---	---	---	---	6.86E-02	95% Chebyshev	2 of 16
Fluoranthene	1.13E-01	8.04E-01	2.22E-02	6.00E-01	5.10E+00	2.85E+00	1.40E+00	6.14E-01	99% Chebyshev	8 of 16
Fluorene	1.22E-02	4.60E-02	1.24E-02	1.90E-02	5.40E-01	2.80E-01	5.40E-01	2.43E-02	95% Chebyshev	4 of 16
gamma-Chlordane	3.13E-04	8.26E-04	6.38E-04	2.26E-03	4.79E-03	3.53E-03	---	5.70E-04	95% Chebyshev	4 of 16
Hexachlorobenzene	1.00E-02	3.19E-02	3.19E-02	---	---	---	---	1.26E-02	95% Student's-t	1 of 16
Indeno(1,2,3-cd)pyrene	7.22E-02	4.05E-01	5.56E-02	---	---	---	---	3.47E-01	99% Chebyshev	6 of 16
Iron	1.34E+04	2.82E+04	6.75E+03	---	---	---	---	1.60E+04	95% Approx. Gamma	16 of 16
Lead	1.16E+01	3.23E+01	5.00E+00	4.67E+01	2.18E+02	1.32E+02	4.70E+01	1.48E+01	95% Approx. Gamma	16 of 16
Isopropylbenzene (cumene)	1.00E-03	7.04E-03	4.64E-03	---	---	---	---	5.80E-03	99% Chebyshev	2 of 16
Lithium	1.05E+01	2.00E+01	6.40E+00	---	---	---	---	1.21E+01	95% Student's-t	16 of 16
Manganese	2.83E+02	4.74E+02	1.92E+02	---	---	---	---	3.22E+02	95% Student's-t	16 of 16
Mercury	2.01E-02	3.60E-02	1.10E-02	1.50E-01	7.10E-01	4.30E-01	1.50E-01	2.33E-02	95% Student's-t	16 of 16
Methylcyclohexane	9.51E-04	3.70E-03	3.70E-03	---	---	---	---	1.30E-03	95% Approx. Gamma	1 of 16
Molybdenum	6.67E-01	5.66E+00	1.40E-01	---	---	---	---	2.15E+00	95% Chebyshev	16 of 16
Nickel	9.59E+00	1.67E+01	5.80E+00	2.09E+01	5.16E+01	3.63E+01	2.10E+01	1.08E+01	95% Student's-t	16 of 16
n-Nitrosodiphenylamine	1.02E-02	4.34E-02	4.34E-02	---	---	---	---	1.41E-02	95% Student's-t	1 of 16
Phenanthrene	7.46E-02	5.08E-01	3.11E-02	2.40E-01	1.50E+00	8.70E-01	1.10E+00	3.88E-01	99% Chebyshev	8 of 16
Pyrene	1.30E-01	8.62E-01	1.76E-02	6.65E-01	2.60E+00	1.63E+00	6.60E-01	6.78E-01	99% Chebyshev	10 of 16
Silver	1.72E-01	5.40E-01	3.00E-01	---	---	---	---	3.76E-01	Maximum*	6 of 16
Strontium	4.49E+01	8.17E+01	3.28E+01	---	---	---	---	5.12E+01	95% Student's-t	16 of 16
Titanium	2.56E+01	3.66E+01	1.91E+01	---	---	---	---	2.78E+01	95% Student's-t	16 of 16
Toluene	1.40E-03	5.81E-03	5.81E-03	9.40E-01	5.66E+00	3.30E+00	6.70E-01	2.00E-03	95% Approx. Gamma	1 of 16
Vanadium	1.39E+01	2.12E+01	9.06E+00	---	---	---	---	1.54E+01	95% Student's-t	16 of 16
Zinc	4.54E+01	9.26E+01	1.80E+01	1.50E+02	4.10E+02	2.80E+02	1.50E+02	5.41E+01	95% Student's-t	16 of 16
LPAH	1.27E-01	7.11E-01	1.10E-01	5.52E-01	3.16E+00	1.86E+00	---	4.92E-01	---	---
HPAH	7.73E-01	4.99E+00	3.77E-01	1.70E+00	9.60E+00	5.65E+00	---	3.77E+00	---	---
Total PAHs	8.99E-01	5.70E+00	4.87E-01	4.02E+00	4.48E+01	2.44E+01	4.00E+00	4.26E+00	---	---

Notes:

* Recommended UCL exceeds maximum observation so the maximum measured concentration was used as the EPC.

* Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-3 of TCEQ, 2006.

(2) - From Table A-2 of TCEQ, 2006.

(3) - Midpoint between Sediment PCL and SEL as per memo received on January 24, 2008 from TCEQ.

(4) - From Table 2 of EPA's EcoTox Threshold ECO Update January, 1999.

(5) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

TABLE 7
EXPOSURE POINT CONCENTRATION (mg/kg)
INTRACOASTAL WATERWAY BACKGROUND SEDIMENT

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Marine Sediment PCL ⁽¹⁾	TCEQ Second Effects Level for Sediment ⁽²⁾	Midpoint of TCEQ PCL and SEL ⁽³⁾	EPA EcoTox Threshold ⁽⁴⁾	95% UCL	Statistic Used ⁽⁵⁾	# of Detects/# of Samples
1,2,4-Trimethylbenzene	9.10E-04	3.91E-03	3.91E-03	2.16E+00	1.30E+01	7.56E+00	---	2.00E-03	95% Approx. Gamma	1 of 9
1,4-Dichlorobenzene	1.40E-03	4.11E-03	4.11E-03	7.00E-01	4.21E+00	2.46E+00	3.50E-01	2.80E-03	95% Approx. Gamma	1 of 9
2-Butanone	1.10E-03	2.16E-03	2.00E-03	---	---	---	---	1.70E-03	95% Student's-t	2 of 9
4,4'-DDT	1.56E-04	5.70E-04	5.70E-04	1.19E-03	6.29E-02	3.20E-02	1.60E-03	3.82E-04	95% Chebyshev	1 of 9
Aluminum	1.22E+04	2.18E+04	4.73E+03	---	---	---	---	1.65E+04	95% Student's-t	9 of 9
Antimony	4.02E+00	7.33E+00	1.68E+00	---	---	---	---	5.40E+00	95% Student's-t	9 of 9
Arsenic	5.81E+00	9.62E+00	2.36E+00	8.20E+00	7.00E+01	3.91E+01	8.20E+00	7.74E+00	95% Student's-t	9 of 9
Barium	209.7.2	2.80E+02	1.11E+02	---	---	---	---	2.39E+02	95% Student's-t	9 of 9
Benzo(b)fluoranthene	8.70E-03	3.69E-02	3.69E-02	---	---	---	---	2.41E-02	95% Chebyshev	1 of 9
Beryllium	7.66E-01	1.32E+00	3.20E-01	---	---	---	---	1.02E+00	95% Student's-t	9 of 9
Boron	2.76E+01	4.79E+01	1.33E+01	---	---	---	---	3.56E+01	95% Student's-t	9 of 9
Carbon Disulfide	1.50E-03	8.41E-03	3.41E-03	---	---	---	---	4.80E-03	95% Approx. Gamma	2 of 9
Chromium	1.28E+01	2.25E+01	5.81E+00	8.10E+01	3.70E+02	2.26E+02	8.10E+01	1.69E+01	95% Student's-t	9 of 9
cis-1,2-Dichloroethene	3.40E-03	2.84E-02	2.84E-02	---	---	---	---	3.45E-02	99% Chebyshev	1 of 9
Cobalt	6.70E+00	1.18E+01	3.32E+00	---	---	---	---	8.66E+00	95% Student's-t	9 of 9
Copper	8.14E+00	1.68E+01	2.68E+00	3.40E+01	2.70E+02	1.52E+02	3.40E+01	1.13E+01	95% Student's-t	9 of 9
Iron	1.65E+04	2.79E+04	7.44E+03	---	---	---	---	2.15E+04	95% Student's-t	9 of 9
Lead	9.59E+00	1.45E+01	5.34E+00	4.67E+01	2.18E+02	1.32E+02	4.70E+01	1.18E+01	95% Student's-t	9 of 9
Lithium	2.14E+01	4.46E+01	7.29E+00	---	---	---	---	3.03E+01	95% Student's-t	9 of 9
Manganese	3.31E+02	4.42E+02	2.12E+02	---	---	---	---	3.86E+02	95% Student's-t	9 of 9
Mercury	1.76E-02	5.00E-02	6.50E-03	1.50E-01	7.10E-01	4.30E-01	1.50E-01	2.73E-02	95% Approx. Gamma	9 of 9
Molybdenum	2.41E-01	3.50E-01	1.60E-01	---	---	---	---	2.83E-01	95% Student's-t	9 of 9
Nickel	1.49E+01	2.73E+01	6.31E+00	2.09E+01	5.16E+01	3.63E+01	2.10E+01	1.99E+01	95% Student's-t	9 of 9
Strontium	5.92E+01	8.74E+01	3.48E+01	---	---	---	---	7.28E+01	95% Student's-t	9 of 9
Titanium	3.18E+01	5.45E+01	2.11E+01	---	---	---	---	3.83E+01	95% Student's-t	9 of 9
Trichloroethene	2.10E-03	1.59E-02	1.59E-02	1.47E+00	8.82E+00	5.15E+00	1.60E+00	4.30E-03	99% Chebyshev	1 of 9
Vanadium	2.02E+01	3.42E+01	1.02E+01	---	---	---	---	2.59E+01	95% Student's-t	9 of 9
Xylene	1.70E-03	3.35E-03	3.35E-03	---	---	---	---	2.60E-03	95% Student's-t	1 of 9
Zinc	3.60E+01	5.41E+01	1.93E+01	1.50E+02	4.10E+02	2.80E+02	1.50E+02	4.45E+01	95% Student's-t	9 of 9
LPAH ⁺⁺				5.52E-01	3.16E+00	1.86E+00	---			
HPAH	8.70E-03	3.69E-02	3.69E-02	1.70E+00	9.60E+00	5.65E+00	---	2.41E-02		
Total PAHs	8.70E-03	3.69E-02	3.69E-02	4.02E+00	4.48E+01	2.44E+01	---	2.41E-02		

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

⁺⁺ No LPAHs were detected in the samples.

(1) - From Table 3-3 of TCEQ, 2006.

(2) - From Table A-2 of TCEQ, 2006.

(3) - Midpoint between Sediment PCL and SEL as per memo received on January 24, 2008 from TCEQ.

(4) - From Table 2 of EPA's EcoTox Threshold ECO Update January, 1999.

(5) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

TABLE 8
EXPOSURE POINT CONCENTRATION (mg/kg)
WETLAND SEDIMENT

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Marine Sediment PCL ⁽¹⁾	TCEQ Second Effects Level for Sediment ⁽²⁾	Midpoint of TCEQ PCL and SEL ⁽³⁾	EPA EcoTox Threshold ⁽⁴⁾	95% UCL	Statistic Used ⁽⁵⁾	# of Detects/# of Samples
1,2-Dichloroethane	2.49E-04	2.40E-03	1.83E-03	4.30E+00	2.58E+01	1.51E+01	---	5.90E-04	95% Chebyshev	3 of 48
2-Methylnaphthalene	2.46E-02	4.30E-01	1.22E-02	7.00E-02	6.70E-01	3.70E-01	---	1.16E-01	99% Chebyshev	4 of 48
4,4'-DDT	9.52E-04	9.22E-03	9.29E-04	1.19E-03	6.29E-02	3.20E-02	1.60E-03	2.20E-03	97.5% Chebyshev	16 of 55
Acenaphthene	1.95E-02	1.33E-01	1.60E-02	1.60E-02	5.00E-01	2.58E-01	1.10E+00	6.40E-02	99% Chebyshev	4 of 48
Acenaphthylene	3.14E-02	5.45E-01	2.91E-02	4.40E-02	6.40E-01	3.42E-01	---	1.65E-01	99% Chebyshev	4 of 48
Aluminum	1.32E+04	1.82E+04	3.40E+03	---	---	---	---	1.40E+04	95% Student's-t	48 of 48
Anthracene	2.88E-02	3.34E-01	8.38E-03	8.53E-02	1.10E+00	5.93E-01	---	1.26E-01	99% Chebyshev	8 of 48
Antimony ⁽⁶⁾	1.15E+00	4.24E+00	4.60E-01	---	---	---	---	1.61E+00	95% Chebyshev	40 of 48
Arsenic	2.53E+00	1.28E+01	1.00E+00	8.20E+00	7.00E+01	3.91E+01	8.20E+00	3.40E+00	95% Approx. Gamma	35 of 48
Barium	1.52E+02	8.20E+02	3.60E+01	---	---	---	---	2.38E+02	95% Chebyshev	48 of 48
Benzo(a)anthracene	5.43E-02	9.93E-01	5.46E-02	2.61E-01	1.60E+00	9.31E-01	---	3.06E-01	99% Chebyshev	5 of 48
Benzo(a)pyrene	1.04E-01	1.30E+00	1.76E-02	4.30E-01	1.60E+00	1.02E+00	4.30E-01	4.76E-01	99% Chebyshev	15 of 48
Benzo(b)fluoranthene	9.02E-02	1.36E+00	1.62E-02	---	---	---	---	4.31E-01	99% Chebyshev	19 of 48
Benzo(g,h,i)perylene	1.98E-01	1.94E+00	4.40E-02	---	---	---	---	7.55E-01	99% Chebyshev	24 of 48
Benzo(k)fluoranthene	6.59E-02	7.30E-01	6.92E-02	---	---	---	---	2.37E-01	99% Chebyshev	14 of 48
Beryllium	8.94E-01	1.37E+00	2.80E-01	---	---	---	---	9.43E-01	95% Student's-t	48 of 48
Boron ⁽⁶⁾	1.45E+01	4.62E+01	5.17E+00	---	---	---	---	3.20E+01	99% Chebyshev	24 of 48
Cadmium	1.03E-01	4.80E-01	3.30E-02	1.20E+00	9.60E+00	5.40E+00	1.20E+00	3.13E-01	99% Chebyshev	20 of 48
Carbazole	1.92E-02	1.41E-01	1.58E-02	---	---	---	---	6.45E-02	99% Chebyshev	5 of 48
Carbon Disulfide	5.25E-04	6.99E-03	3.34E-03	---	---	---	---	2.60E-03	99% Chebyshev	4 of 48
Chromium	1.51E+01	4.46E+01	8.96E+00	8.10E+01	3.70E+02	2.26E+02	8.10E+01	1.64E+01	95% Student's-t	48 of 48
Chromium VI	9.56E-01	4.04E+00	1.30E+00	---	---	---	---	3.36E+00	99% Chebyshev	6 of 25
Chrysene	2.17E-01	4.05E+00	1.10E-02	3.84E-01	2.80E+00	1.59E+00	---	1.24E+00	99% Chebyshev	19 of 48
Cobalt	6.98E+00	9.89E+00	3.00E+00	---	---	---	---	7.32E+00	95% Student's-t	48 of 48
Copper	1.45E+01	4.90E+01	5.44E+00	3.40E+01	2.70E+02	1.52E+02	3.40E+01	1.66E+01	95% Student's-t	48 of 48
Dibenz(a,h)anthracene	2.03E-01	2.91E+00	1.29E-01	6.34E-02	2.60E-01	1.62E-01	---	1.10E+00	99% Chebyshev	6 of 48
Dibenzofuran	1.39E-02	8.00E-02	1.00E-02	---	---	---	2.00E+00	2.50E-02	95% Chebyshev	3 of 48
Endosulfan Sulfate	1.80E-03	6.00E-02	7.31E-03	---	---	---	5.40E-03	1.44E-02	99% Chebyshev	3 of 48
Endrin Aldehyde	1.00E-03	1.00E-02	5.66E-04	---	---	---	---	4.30E-03	99% Chebyshev	9 of 48
Endrin Ketone	7.85E-04	1.30E-02	3.29E-03	---	---	---	---	2.00E-03	95% Chebyshev	3 of 48
Fluoranthene	1.08E-01	2.17E+00	1.20E-02	6.00E-01	5.10E+00	2.85E+00	1.40E+00	6.37E-01	99% Chebyshev	13 of 48
Fluorene	1.86E-02	1.39E-01	1.50E-02	1.90E-02	5.40E-01	2.80E-01	5.40E-01	6.37E-02	99% Chebyshev	4 of 48
gamma-Chlordane	4.05E-04	3.60E-03	7.69E-04	2.26E-03	4.79E-03	3.53E-03	---	8.27E-04	95% Chebyshev	4 of 48
Indeno(1,2,3-cd)pyrene	2.01E-01	1.94E+00	6.28E-02	---	---	---	---	7.85E-01	99% Chebyshev	23 of 48
Iron	1.72E+04	6.09E+04	1.11E+04	---	---	---	---	1.88E+04	95% Student's-t	49 of 48
Lead	2.54E+01	2.37E+02	9.40E+00	4.67E+01	2.18E+02	1.32E+02	4.70E+01	4.68E+01	95% Chebyshev	48 of 48
Lithium	1.87E+01	2.76E+01	5.43E+00	---	---	---	---	1.96E+01	95% Student's-t	48 of 48
Manganese	3.32E+02	1.01E+03	8.76E+01	---	---	---	---	3.83E+02	95% Approx. Gamma	48 of 48
Mercury	1.99E-02	8.10E-02	6.10E-03	1.50E-01	7.10E-01	4.30E-01	1.50E-01	2.68E-02	95% H-UCL	26 of 48
Molybdenum	5.81E-01	3.24E+00	1.30E-01	---	---	---	---	7.63E-01	95% Approx. Gamma	38 of 48
Nickel	1.73E+01	2.77E+01	1.09E+01	2.09E+01	5.16E+01	3.63E+01	2.10E+01	1.81E+01	95% Student's-t	48 of 48
Phenanthrene	7.61E-02	1.30E+00	2.30E-02	2.40E-01	1.50E+00	8.70E-01	1.10E+00	4.32E-01	99% Chebyshev	12 of 48
Pyrene	1.54E-01	1.64E+00	1.59E-02	6.65E-01	2.60E+00	1.63E+00	6.60E-01	6.63E-01	99% Chebyshev	19 of 48
Strontium	6.70E+01	3.30E+02	1.88E+01	---	---	---	---	7.64E+01	95% H-UCL	48 of 48
Tin ⁽⁶⁾	6.38E-01	4.61E+00	3.45E+00	---	---	---	---	1.26E+00	95% Chebyshev	4 of 48
Titanium	2.91E+01	6.87E+01	8.15E+00	---	---	---	---	3.27E+01	95% Approx. Gamma	48 of 48
Toluene	6.55E-04	2.14E-03	1.57E-03	9.40E-01	5.66E+00	3.30E+00	6.70E-01	1.20E-03	95% Chebyshev	3 of 48
Vanadium	2.17E+01	3.20E+01	9.02E+00	---	---	---	---	2.28E+01	95% Student's-t	48 of 48
Zinc	1.39E+02	9.03E+02	3.15E+01	1.50E+02	4.10E+02	2.80E+02	1.50E+02	2.36E+02	95% Chebyshev	53 of 53
LPAH	1.99E-01	2.88E+00	1.04E-01	5.52E-01	3.16E+00	1.86E+00	---	9.67E-01		
HPAH	1.40E+00	1.90E+01	4.32E-01	1.70E+00	9.60E+00	5.65E+00	---	6.63E+00		
TOTAL PAHs	1.59E+00	2.19E+01	5.36E-01	4.02E+00	4.48E+01	1.18E+01	4.00E+00	7.60E+00		

Notes:

* Chemicals of interest are any chemical measured in at least one sample at a frequency of detection greater than five percent.

(1) - From Table 3-3 of TCEQ, 2006.

(2) - From Table A-2 of TCEQ, 2006.

(3) - Midpoint between Sediment PCL and SEL as per memo received on January 24, 2008 from TCEQ.

(4) - From Table 2 of EPA's EcoTox Threshold ECO Update January, 1999.

(5) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

(6) - Samples 2WSED8, SWSED10, 4WSED2, and 4WSED3 were re-analyzed for antimony, boron, and tin because they were measured at concentrations much higher than the rest of the data although QA/QC indicated that they were acceptable. The re-analysis was run twice with good concurrence between the two re-analyses but with very different values from the original so the first re-analyzed value was used in the UCL calculation.

TABLE 9
EXPOSURE POINT CONCENTRATION (mg/kg)
POND SEDIMENT

Chemicals of Interest*	Average	Max Detection	Min Detection	TCEQ Marine Sediment PCL ⁽¹⁾	TCEQ Second Effects Level for Sediment ⁽²⁾	Midpoint of TCEQ PCL and SEL ⁽³⁾	EPA EcoTox Threshold ⁽⁴⁾	RME EPC	Statistic Used ⁽⁵⁾	# of Detects/# of Samples
2,4,6-Trichlorophenol	1.75E-02	4.29E-02	4.29E-02	---	---	---	---	4.29E-02	RME EPC is max detect	1 of 8
4,4'-DDD	6.96E-03	6.76E-04	6.76E-04	1.22E-03	7.81E-03	4.52E-03	---	6.76E-04	RME EPC is max detect*	3 of 8
4,4'-DDT	4.16E-03	1.57E-03	1.11E-03	1.19E-03	6.29E-02	3.20E-02	1.60E-03	1.57E-03	RME EPC is max detect*	1 of 8
Acetone	2.38E-02	7.98E-02	7.98E-02	1.67E+02	1.00E+04	5.09E+03	---	7.98E-02	RME EPC is max detect	1 of 8
Aluminum	1.17E+04	1.63E+04	7.99E+03	---	---	---	---	1.63E+04	RME EPC is max detect	8 of 8
Antimony	7.95E-01	1.85E+00	3.30E-01	---	---	---	---	1.85E+00	RME EPC is max detect	8 of 8
Arsenic	1.74E+00	5.01E+00	3.39E+00	8.20E+00	7.00E+01	3.91E+01	8.20E+00	5.01E+00	RME EPC is max detect	3 of 8
Barium	1.99E+02	4.17E+02	1.08E+02	---	---	---	---	4.17E+02	RME EPC is max detect	8 of 8
Benzo(b)fluoranthene	4.77E-02	1.06E-01	2.93E-02	---	---	---	---	1.06E-01	RME EPC is max detect	6 of 8
Benzo(g,h,i)perylene	2.40E-02	1.35E-01	1.35E-01	---	---	---	---	1.35E-01	RME EPC is max detect	1 of 8
Benzo(k)fluoranthene	5.27E-02	1.30E-01	1.10E-01	---	---	---	---	1.30E-01	RME EPC is max detect	3 of 8
Beryllium	8.34E-01	1.13E+00	5.80E-01	---	---	---	---	1.13E+00	RME EPC is max detect	8 of 8
beta-BHC	7.96E-03	6.99E-04	6.99E-04	---	---	---	---	7.00E-04	RME EPC is max detect*	1 of 8
Boron	1.50E+01	2.84E+01	1.10E+01	---	---	---	---	2.84E+01	RME EPC is max detect	5 of 8
Bromomethane	8.90E-03	3.10E-02	1.40E-02	---	---	---	---	3.10E-02	RME EPC is max detect	2 of 8
Cadmium	1.47E-01	2.70E-01	1.90E-01	1.20E+00	9.60E+00	5.40E+00	1.20E+00	2.70E-01	RME EPC is max detect	5 of 8
Carbon Disulfide	1.40E-03	7.71E-03	7.71E-03	---	---	---	---	7.70E-03	RME EPC is max detect	1 of 8
Chromium	1.29E+01	2.01E+01	8.29E+00	8.10E+01	3.70E+02	2.26E+02	8.10E+01	2.01E+01	RME EPC is max detect	8 of 8
Chrysene	9.50E-03	2.57E-02	2.57E-02	3.84E-01	2.80E+00	1.59E+00	---	2.57E-02	RME EPC is max detect	1 of 8
Cobalt	6.94E+00	8.99E+00	5.19E+00	---	---	---	---	8.99E+00	RME EPC is max detect	8 of 8
Copper	1.52E+01	2.68E+01	8.33E+00	3.40E+01	2.70E+02	1.52E+02	3.40E+01	2.68E+01	RME EPC is max detect	8 of 8
Iron	1.53E+04	2.01E+04	1.13E+04	---	---	---	---	2.01E+04	RME EPC is max detect	8 of 8
Lead	1.75E+01	3.05E+01	1.06E+01	4.67E+01	2.18E+02	1.32E+02	4.70E+01	3.05E+01	RME EPC is max detect	8 of 8
Lithium	1.85E+01	2.37E+01	1.35E+01	---	---	---	---	2.37E+01	RME EPC is max detect	8 of 8
m,p-Cresol	1.49E-02	3.75E-02	3.75E-02	---	---	---	---	3.75E-02	RME EPC is max detect	1 of 8
Manganese	4.88E+02	7.11E+02	3.52E+02	---	---	---	---	7.11E+02	RME EPC is max detect	8 of 8
Methyl Iodide	8.10E-03	4.10E-02	4.10E-02	---	---	---	---	1.11E-02	RME EPC is max detect	1 of 8
Molybdenum	1.46E-01	6.00E-01	2.10E-01	---	---	---	---	6.00E-01	RME EPC is max detect	2 of 8
Nickel	1.63E+01	2.06E+01	1.23E+01	2.09E+01	5.16E+01	3.63E+01	2.10E+01	2.06E+01	RME EPC is max detect	8 of 8
Pyrene	1.47E-02	2.65E-02	2.01E-02	6.65E-01	2.60E+00	1.63E+00	6.60E-01	2.65E-02	RME EPC is max detect	3 of 8
Strontium	1.04E+02	1.81E+02	6.33E+01	---	---	---	---	1.81E+02	RME EPC is max detect	8 of 8
Titanium	3.00E+01	4.05E+01	1.91E+01	---	---	---	---	4.05E+01	RME EPC is max detect	8 of 8
Vanadium	2.18E+01	2.74E+01	1.68E+01	---	---	---	---	2.74E+01	RME EPC is max detect	8 of 8
Zinc	3.32E+02	9.99E+02	3.82E+01	1.50E+02	4.10E+02	2.80E+02	1.50E+02	9.99E+02	RME EPC is max detect	8 of 8
LPAH**				---	---	---	---			
HPAHs	1.49E-01	4.23E-01	3.20E-01	1.70E+00	9.60E+00	5.65E+00	---	4.23E-01		
Total PAHs	1.49E-01	1.49E-01	1.49E-01	4.02E+00	4.48E+01	2.44E+01	4.00E+00	4.23E-01		

Notes:

*The maximum detected value is sometimes lower than the average since 1/2 of the reporting limit was used as a proxy value when it was not detected, and because J flag data were used in the risk assessment.

* Chemicals of interest are any chemical measured in at least one sample.

** No LPAHs were detected in the samples.

(1) - From Table 3-3 of TCEQ, 2006.

(2) - From Table A-2 of TCEQ, 2006.

(3) - Midpoint between Sediment PCL and SEL as per memo received on January 24, 2008 from TCEQ.

(4) - From Table 2 of EPA's EcoTox Threshold ECO Update January, 1999.

(5) - Recommended exposure point concentration to be used based on data distribution per Pro UCL (see Appendix A). When the compound was not detected in a given sample, one-half of the sample detection limit was used as the proxy concentration for that sample.

TABLE 10
EXPOSURE POINT CONCENTRATION (mg/L)
INTRACOASTAL WATERWAY SURFACE WATER (TOTAL)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
Acrylonitrile	9.38E-04	2.10E-03	2.10E-03	2.91E-01	2.10E-03	RME EPC is max detect	1 of 4
Aluminum	4.05E-01	5.50E-01	2.80E-01	---	5.50E-01	RME EPC is max detect	4 of 4
Barium	2.40E-02	2.60E-02	2.20E-02	2.50E+01	2.60E-02	RME EPC is max detect	4 of 4
Boron	4.69E+00	4.81E+00	4.60E+00	---	4.81E+00	RME EPC is max detect	4 of 4
Chromium	7.98E-02	1.20E-01	7.00E-02	---	1.20E-01	RME EPC is max detect	4 of 4
Copper	6.53E-03	1.10E-02	9.10E-03	---	1.10E-02	RME EPC is max detect	2 of 4
Iron	4.63E-01	5.90E-01	3.20E-01	---	5.90E-01	RME EPC is max detect	4 of 4
Lithium	2.53E-01	2.70E-01	2.20E-01	---	2.70E-01	RME EPC is max detect	4 of 4
Manganese	4.03E-02	4.80E-02	3.30E-02	---	4.80E-02	RME EPC is max detect	4 of 4
Silver	2.80E-03	3.70E-03	2.80E-03	---	3.70E-03	RME EPC is max detect	3 of 4
Strontium	7.22E+00	7.35E+00	6.95E+00	---	7.35E+00	RME EPC is max detect	4 of 4
Titanium	3.90E-03	5.70E-03	2.00E-03	---	5.70E-03	RME EPC is max detect	4 of 4
Vanadium	4.25E-02	6.10E-02	3.50E-02	---	6.10E-02	RME EPC is max detect	4 of 4

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-2 of TCEQ, 2006 and only the TCEQ Ecological Benchmarks for Water without the "dissolved" notation were included in the table.

TABLE 11
EXPOSURE POINT CONCENTRATION (mg/L)
INTRACOASTAL WATERWAY BACKGROUND SURFACE WATER (TOTAL)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
4,4'-DDD	3.30E-06	7.62E-06	3.60E-06	2.50E-05	7.62E-06	RME EPC is max detect	2 of 4
4,4'-DDT	4.93E-06	1.30E-05	1.30E-05	1.00E-06	1.30E-05	RME EPC is max detect	1 of 4
Acetone	1.47E-03	4.52E-03	4.52E-03	2.82E+02	4.52E-03	RME EPC is max detect	1 of 4
Aldrin	9.24E-06	1.10E-05	4.40E-06	---	1.10E-05	RME EPC is max detect	4 of 4
Aluminum	2.44E-01	4.00E-01	2.10E-01	---	4.00E-01	RME EPC is max detect	4 of 4
Barium	1.96E-02	2.00E-02	2.00E-02	2.50E+01	2.00E-02	RME EPC is max detect	4 of 4
Benzo(g,h,i)perylene	1.20E-04	2.02E-04	2.02E-04	---	2.02E-04	RME EPC is max detect	1 of 4
Benzo(k)fluoranthene	1.73E-04	3.11E-04	3.11E-04	---	3.11E-04	RME EPC is max detect	1 of 4
Bis(ethylhexyl) Phthalate	4.17E-03	1.97E-02	1.94E-02	---	1.97E-02	RME EPC is max detect	2 of 4
Boron	4.38E+00	4.50E+00	4.27E+00	---	4.50E+00	RME EPC is max detect	4 of 4
Chromium	7.84E-02	7.90E-02	7.80E-02	---	7.90E-02	RME EPC is max detect	4 of 4
Chromium VI	6.20E-03	1.10E-02	1.10E-02	---	1.10E-02	RME EPC is max detect	1 of 4
Chrysene	1.61E-04	3.68E-04	3.68E-04	---	3.68E-04	RME EPC is max detect	1 of 4
Di-n-butyl Phthalate	6.70E-04	1.42E-03	8.28E-04	5.00E-03	1.42E-03	RME EPC is max detect	2 of 4
Di-n-octyl Phthalate	2.65E-04	6.50E-04	6.50E-04	---	6.50E-04	RME EPC is max detect	1 of 4
Iron	3.40E-01	4.30E-01	3.40E-01	---	4.30E-01	RME EPC is max detect	4 of 4
Lithium	3.00E-01	3.40E-01	2.70E-01	---	3.40E-01	RME EPC is max detect	4 of 4
Manganese	3.60E-02	4.10E-02	3.40E-02	---	4.10E-02	RME EPC is max detect	4 of 4
Methoxychlor	3.66E-06	1.40E-05	1.40E-05	3.00E-05	1.40E-05	RME EPC is max detect	1 of 4
Molybdenum	2.72E-03	4.20E-03	1.80E-03	---	4.20E-03	RME EPC is max detect	2 of 4
Silver	5.43E-03	5.90E-03	4.70E-03	---	5.90E-03	RME EPC is max detect	4 of 4
Strontium	7.76E+00	8.31E+00	7.31E+00	---	8.31E+00	RME EPC is max detect	4 of 4
Titanium	2.98E-03	4.20E-03	2.40E-03	---	4.20E-03	RME EPC is max detect	4 of 4
Vanadium	4.14E-02	3.70E-02	1.10E-02	---	3.70E-02	RME EPC is max detect	4 of 4
LPAHs ⁺⁺				---			
HPAHs	4.55E-04	8.81E-04	8.81E-04	---	8.81E-04		
Total PAHs	4.55E-04	4.55E-04	4.55E-04	---	4.55E-04		

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

⁺⁺ No LPAHs were detected in the samples.

(1) - From Table 3-2 of TCEQ, 2006 and only the TCEQ Ecological Benchmarks for Water without the "dissolved" notation were included in the table.

TABLE 12
EXPOSURE POINT CONCENTRATION (mg/L)
WETLAND SURFACE WATER (TOTAL)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
1,2-Dichloroethane	2.30E-03	3.85E-03	2.55E-03	5.65E+00	3.85E-03	RME EPC is max detect	3 of 4
Acrolein	1.21E-02	9.29E-03	9.29E-03	5.00E-03	9.30E-03	RME EPC is max detect*	1 of 4
Aluminum	5.08E-01	8.00E-01	1.70E-01	---	8.00E-01	RME EPC is max detect	4 of 4
Barium	2.20E-01	3.70E-01	1.50E-01	2.50E+01	3.70E-01	RME EPC is max detect	4 of 4
Boron	1.96E+00	2.42E+00	8.30E-01	---	2.42E+00	RME EPC is max detect	4 of 4
Chromium	1.49E-02	3.70E-02	2.00E-02	---	3.70E-02	RME EPC is max detect	2 of 4
Chromium VI	3.13E-03	8.00E-03	8.00E-03	---	8.00E-03	RME EPC is max detect	1 of 4
Copper	6.38E-03	1.10E-02	9.50E-03	---	1.10E-02	RME EPC is max detect	2 of 4
Iron	6.45E-01	1.08E+00	1.90E-01	---	1.08E+00	RME EPC is max detect	4 of 4
Lithium	1.89E-01	2.50E-01	5.70E-02	---	2.50E-01	RME EPC is max detect	4 of 4
Manganese	1.37E-01	3.40E-01	1.80E-02	---	3.40E-01	RME EPC is max detect	4 of 4
Mercury	3.75E-05	7.00E-05	4.00E-05	---	7.00E-05	RME EPC is max detect	2 of 4
Molybdenum	9.30E-03	1.50E-02	5.60E-03	---	1.50E-02	RME EPC is max detect	3 of 4
Nickel	1.10E-03	2.20E-03	1.20E-03	---	2.20E-03	RME EPC is max detect	2 of 4
Strontium	5.27E+00	6.64E+00	1.87E+00	---	6.64E+00	RME EPC is max detect	4 of 4
Titanium	6.40E-03	9.80E-03	2.40E-03	---	9.80E-03	RME EPC is max detect	4 of 4
Zinc	7.30E-03	2.20E-02	2.20E-02	---	2.20E-02	RME EPC is max detect	1 of 4

Notes:

*The maximum detected value is sometimes lower than the average since 1/2 of the reporting limit was used as a proxy value when it was not detected, and because J flag data were used in the risk assessment.

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-2 of TCEQ, 2006 and only the TCEQ Ecological Benchmarks for Water without the "dissolved" notation were included in the table.

TABLE 13
EXPOSURE POINT CONCENTRATION (mg/L)
POND SURFACE WATER (TOTAL)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
4-Chloroaniline	2.79E-04	8.23E-04	8.23E-04	---	8.00E-04	RME EPC is max detect	1 of 6
Aluminum	9.13E-01	2.22E+00	4.10E-01	---	2.22E+00	RME EPC is max detect	5 of 6
Antimony	3.82E-03	7.60E-03	3.00E-03	---	7.60E-03	RME EPC is max detect	3 of 6
Arsenic	5.40E-03	1.30E-02	1.20E-02	---	1.30E-02	RME EPC is max detect	2 of 6
Barium	1.45E-01	1.90E-01	1.30E-01	2.50E+01	1.90E-01	RME EPC is max detect	6 of 6
Benzo(a)pyrene	1.12E-04	3.48E-04	3.48E-04	---	3.00E-04	RME EPC is max detect	1 of 6
Benzo(b)fluoranthene	4.03E-04	1.81E-03	1.81E-03	---	1.80E-03	RME EPC is max detect	1 of 6
Benzo(g,h,i)perylene	3.71E-04	1.73E-03	1.73E-03	---	1.70E-03	RME EPC is max detect	1 of 6
Benzo(k)fluoranthene	2.06E-04	5.42E-04	5.42E-04	---	5.00E-04	RME EPC is max detect	1 of 6
Bis(2-ethylhexyl)phthalate	1.92E-02	4.00E-02	2.90E-02	---	4.00E-02	RME EPC is max detect	3 of 6
Boron	2.97E+00	3.52E+00	2.45E+00	---	3.52E+00	RME EPC is max detect	6 of 6
Chromium	8.50E-04	1.50E-03	1.50E-03	---	1.50E-03	RME EPC is max detect	1 of 6
Chromium VI	8.50E-03	1.60E-02	1.50E-02	---	1.60E-02	RME EPC is max detect	2 of 6
Chrysene	2.48E-04	7.10E-04	7.10E-04	---	7.00E-04	RME EPC is max detect	1 of 6
Cobalt	9.12E-04	3.20E-03	5.20E-04	---	3.20E-03	RME EPC is max detect	2 of 6
Dibenz(a,h)anthracene	6.26E-04	3.04E-03	3.04E-03	---	3.00E-03	RME EPC is max detect	1 of 6
Di-n-butyl Phthalate	3.12E-03	3.81E-03	1.07E-03	5.00E-03	3.80E-03	RME EPC is max detect	5 of 6
Indeno(1,2,3-cd)pyrene	6.73E-04	3.44E-03	3.44E-03	---	3.40E-03	RME EPC is max detect	1 of 6
Iron	2.27E+00	6.67E+00	5.20E-01	---	6.67E+00	RME EPC is max detect	6 of 6
Lead	2.63E-03	1.10E-02	1.10E-02	---	1.10E-02	RME EPC is max detect	1 of 6
Lithium	1.16E-01	1.60E-01	6.70E-02	---	1.60E-01	RME EPC is max detect	6 of 6
Manganese	6.37E-01	1.44E+00	8.50E-02	---	1.44E+00	RME EPC is max detect	6 of 6
Molybdenum	8.73E-03	1.80E-02	1.30E-02	---	1.80E-02	RME EPC is max detect	3 of 6
Nickel	4.60E-03	7.90E-03	3.00E-03	---	7.90E-03	RME EPC is max detect	6 of 6
Selenium	4.26E-03	9.80E-03	9.80E-03	1.36E-01	9.80E-03	RME EPC is max detect	1 of 6
Silver	9.30E-03	1.50E-02	3.70E-03	---	1.50E-02	RME EPC is max detect	6 of 6
Strontium	4.47E+00	7.19E+00	1.77E+00	---	7.19E+00	RME EPC is max detect	6 of 6
Thallium	2.86E-03	7.70E-03	6.20E-03	2.13E-02	7.70E-03	RME EPC is max detect	2 of 6
Titanium	1.90E-02	4.40E-02	2.10E-03	---	4.40E-02	RME EPC is max detect	6 of 6
Vanadium	3.20E-03	8.40E-03	4.30E-03	---	8.40E-03	RME EPC is max detect	3 of 6
Zinc	1.20E-01	6.30E-01	2.70E-02	---	6.30E-01	RME EPC is max detect	3 of 6
LPAHs				---			
HPAHs	2.64E-03	1.16E-02	1.16E-02	---	1.14E-02		
Total PAHs	2.64E-03	2.64E-03	2.64E-03	---	2.64E-03		

Notes:

* Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-2 of TCEQ, 2006 and only the TCEQ Ecological Benchmarks for Water without the "dissolved" notation were included in the table.

TABLE 14
EXPOSURE POINT CONCENTRATION (mg/L)
INTRACOASTAL WATERWAY SURFACE WATER (DISSOLVED METALS)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
Aluminum	6.48E-02	4.70E-02	4.70E-02	---	4.70E-02	RME EPC is max detect	1 of 4
Barium	2.63E-02	2.80E-02	2.30E-02	2.50E+01	2.80E-02	RME EPC is max detect	4 of 4
Boron	4.79E+00	4.99E+00	4.30E+00	---	4.99E+00	RME EPC is max detect	4 of 4
Lithium	2.10E-01	2.20E-01	2.00E-01	---	2.20E-01	RME EPC is max detect	4 of 4
Manganese	4.85E-03	6.00E-03	2.50E-03	---	6.00E-03	RME EPC is max detect	4 of 4
Nickel	2.63E-03	3.30E-03	1.30E-03	1.31E-02	3.30E-03	RME EPC is max detect	4 of 4
Selenium	4.25E-02	6.30E-02	2.80E-02		6.30E-02	RME EPC is max detect	4 of 4
Strontium	8.04E+00	8.47E+00	7.36E+00	---	8.47E+00	RME EPC is max detect	4 of 4

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-2 of TCEQ.

TABLE 15
EXPOSURE POINT CONCENTRATION (mg/L)
INTRACOASTAL WATERWAY BACKGROUND SURFACE WATER (DISSOLVED METALS)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water	RME EPC	Statistic Used	# of Detects/# of Samples
Barium	1.65E-02	1.90E-02	1.20E-02	2.50E+01	1.90E-02	RME EPC is max detect	4 of 4
Boron	3.98E+00	4.33E+00	3.04E+00	---	4.33E+00	RME EPC is max detect	4 of 4
Chromium	7.38E-02	7.80E-02	6.40E-02	1.03E-01	7.80E-02	RME EPC is max detect	4 of 4
Iron	5.40E-02	6.00E-02	6.00E-02	---	6.00E-02	RME EPC is max detect	1 of 4
Lithium	2.90E-01	3.90E-01	1.90E-01	---	3.90E-01	RME EPC is max detect	4 of 4
Manganese	1.53E-02	1.80E-02	1.10E-02	---	1.80E-02	RME EPC is max detect	4 of 4
Molybdenum	3.68E-03	3.90E-03	3.90E-03	---	3.90E-03	RME EPC is max detect	1 of 4
Silver	5.23E-03	5.80E-03	4.30E-03	1.90E-04	5.80E-03	RME EPC is max detect	4 of 4
Strontium	6.84E+00	7.46E+00	5.20E+00	---	7.46E+00	RME EPC is max detect	4 of 4
Vanadium	1.23E-02	1.50E-02	9.30E-03	---	1.50E-02	RME EPC is max detect	4 of 4

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) - From Table 3-2 of TCEQ.

TABLE 16
EXPOSURE POINT CONCENTRATION (mg/L)
WETLAND SURFACE WATER (DISSOLVED METALS)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
Barium	3.20E-04	3.50E-01	1.40E-01	2.50E+01	3.50E-01	RME EPC is max detect	4 of 4
Boron	2.70E-02	2.75E+00	8.50E-01	---	2.75E+00	RME EPC is max detect	4 of 4
Chromium	1.20E-03	3.70E-02	1.90E-02	1.03E-01	3.70E-02	RME EPC is max detect	2 of 4
Copper	2.50E-03	1.10E-02	5.30E-03	3.60E-03	1.10E-02	RME EPC is max detect	3 of 4
Lithium	3.50E-03	2.80E-01	5.70E-02	---	2.80E-01	RME EPC is max detect	4 of 4
Manganese	6.00E-04	3.30E-01	2.50E-02	---	3.30E-01	RME EPC is max detect	4 of 4
Molybdenum	2.70E-03	1.70E-02	5.40E-03	---	1.70E-02	RME EPC is max detect	3 of 4
Nickel	4.50E-04	1.30E-03	4.90E-04	1.31E-02	1.30E-03	RME EPC is max detect	2 of 4
Strontium	9.40E-04	7.01E+00	1.89E+00	---	7.01E+00	RME EPC is max detect	4 of 4

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) From Table 3-2 of TCEQ, 2006.

TABLE 17
EXPOSURE POINT CONCENTRATION (mg/L)
POND SURFACE WATER (DISSOLVED METALS)

Chemicals of Interest ⁺	Average	Max Detection	Min Detection	TCEQ Ecological Benchmark for Water ⁽¹⁾	RME EPC	Statistic Used	# of Detects/# of Samples
Antimony	3.50E-03	6.30E-03	3.10E-03	---		RME EPC is max detect	3 of 6
Barium	1.25E-01	1.30E-01	1.20E-01	2.50E+01		RME EPC is max detect	6 of 6
Boron	2.79E+00	3.33E+00	2.36E+00	---		RME EPC is max detect	6 of 6
Lithium	1.45E-01	2.20E-01	8.00E-02	---		RME EPC is max detect	6 of 6
Manganese	4.65E-01	1.06E+00	6.60E-02	---		RME EPC is max detect	6 of 6
Molybdenum	1.01E-02	1.90E-02	1.80E-02	---		RME EPC is max detect	3 of 6
Nickel	1.43E-03	2.60E-03	1.90E-03	1.31E-01		RME EPC is max detect	3 of 6
Silver	1.83E-03	2.90E-03	9.40E-04	1.90E-04		RME EPC is max detect	6 of 6
Strontium	4.32E+00	6.97E+00	1.78E+00	---		RME EPC is max detect	6 of 6
Thallium	1.53E-03	3.20E-03	1.40E-03	2.13E-02		RME EPC is max detect	3 of 6
Vanadium	7.58E-04	2.10E-03	2.10E-03	---		RME EPC is max detect	1 of 6

Notes:

⁺ Chemicals of interest are any chemical measured in at least one sample.

(1) From Table 3-2 of TCEQ, 2006.

TABLE 18
TERRESTRIAL HABITAT ASSESSMENT AND MEASUREMENT ENDPOINTS

Receptor Group	Receptor of Potential Concern	Assessment Endpoint for SLERA	Ecological Risk Question	Testable Hypothesis for SLERA	Measurement Endpoint
Plants	Terrestrial plants	Protection of vegetation survival growth, and reproduction due to uptake of chemicals in soil.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction of plants?	Average and 95%UCL soil concentrations do not exceed plant-based screening criteria, when available.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to plant-based screening levels. 2) Evaluate the likelihood of localized effects.
Invertebrates	Earthworm	Protection of soil invertebrate community from uptake and direct toxic effects on detritivore abundance, diversity, productivity due to chemicals in soil.	1) Does exposure to chemicals in soil adversely affect the abundance, diversity, productivity, and function? 2) Do soil-to-earthworm BAFs suggest uptake of chemicals?	Average and 95%UCL soil concentrations do not exceed screening criteria.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate. 3) Evaluate likelihood of localized effects (maximum concentration).
Small mammalian herbivore	Deer mouse	Protection of the small mammal survival, growth, and reproduction due to uptake of chemicals in soil.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction? 2) Do soil-to-mammal BAFs suggest uptake of chemicals?	Average and 95% UCL intake levels do not exceed TRVs.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.
Mammalian predator	Coyote	Protection of the mammalian predator survival, growth, and reproduction due to the uptake of chemicals in prey items.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction? 2) Do soil-to-mammal BAFs suggest uptake of chemicals?	Average and 95% UCL intake levels do not exceed TRVs.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.
Reptilian predator	Rat snake	Protection of the reptilian predator survival, growth, and reproduction due to the uptake of chemicals in prey items.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction? 2) Do soil-to-mammal BAFs suggest uptake of chemicals?	Does the qualitative weight-of-evidence suggest an adverse risk?	1) Evaluate habitat, food resources, other stressors, and toxicological information for reptiles and draw conclusions of potential risk based on this information.
Avian herbivore/omnivore	American robin	Protection of the omnivorous avian survival, growth, and reproduction due to uptake of chemicals in soil.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction? 2) Do soil-to-avian omnivore BAFs suggest uptake of chemicals?	Average and 95% UCL intake levels do not exceed TRVs.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.
Avian predator	Red-tailed hawk	Protection of carnivorous avian community population abundance, diversity, and productivity due to uptake of chemicals in prey items.	1) Does exposure to chemicals in soil adversely affect the survival, growth, and reproduction? 2) Do soil-to-higher trophic level BAFs suggest uptake of chemicals and/or bioaccumulation?	Average and 95% UCL intake levels do not exceed TRVs.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in soil to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.

Notes:

SLERA -- Screening-Level Ecological Risk Assessment

BAF -- biota accumulation factor

BSAF -- biota to sediment accumulation factor

NOAEL -- no observable adverse effects level

95% UCL -- 95 percent upper confidence limit on the mean

TRV -- Toxicity Reference Value

TABLE 19
ESTUARINE WETLAND AND AQUATIC HABITAT ASSESSMENT AND MEASUREMENT ENDPOINTS

Receptor Group	Receptor of Potential Concern	Assessment Endpoint for SLERA	Ecological Risk Question	Testable Hypothesis for SLERA	Measurement Endpoint
Benthos and zooplankton	Polychaetes	Protection of benthic invertebrate community from uptake and direct toxic effects on abundance, diversity, and productivity due to chemicals in sediment.	1) Does exposure to chemicals in sediment adversely affect the abundance, diversity, productivity, and function? 2) Do sediment-to-biota BSAFs suggest uptake of chemicals?	Average and 95% UCL sediment concentrations do not exceed screening criteria.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in sediment to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate. 3) Evaluate likelihood of localized effects (maximum concentration).
Fish and shellfish	Fiddler crab	Protection of invertebrate community abundance, diversity, and productivity due to uptake of chemicals in sediment.	1) Does exposure to chemical in sediment adversely affect the survival, reproduction, or growth? 2) Do sediment-to-biota BSAFs suggest uptake of chemicals?	Average and 95% UCL sediment concentrations do not exceed screening criteria.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in sediment to receptor-specific screening level based on ERLs available in the literature. 2) Evaluate compound's ability to bioconcentrate.
	Killifish	Protection of localized herbivorous fish survival, growth, and reproduction due to uptake of chemicals in sediment and biota.	1) Does exposure to chemical in sediment adversely affect the survival, reproduction, or growth? 2) Do sediment-to-biota BSAFs suggest uptake of chemicals?	Average and 95% UCL surface water concentrations do not exceed surface water quality standards.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in surface to surface water quality standards. 2) Evaluate compound's ability to bioconcentrate.
Carnivorous fish	Black drum	Protection of carnivorous fish survival, growth, and reproduction due to uptake of chemicals in sediment and prey items.	1) Does exposure to chemicals in sediment and/or prey items adversely affect the survival, growth, and reproduction of a first order carnivorous fish? 2) Do sediment-to-biota BSAFs suggest uptake of chemicals and/or bioaccumulation?	Average and 95% UCL surface water concentrations do not exceed surface water quality standards.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in surface water to surface water quality standards. 2) Evaluate compound's ability to bioconcentrate.
	Spotted seatrout	Protection of carnivorous fish survival, growth, and reproduction due to uptake of chemicals in prey items.	1) Does exposure to chemicals in prey items adversely affect the survival, growth, and reproduction of a second order carnivorous fish? 2) Does sediment-to-biota BSAF suggest bioaccumulation?	Average and 95% UCL surface water concentrations do not exceed surface water quality standards.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in surface to surface water quality standards. 2) Evaluate compound's ability to bioconcentrate.
Avian predator	Sandpiper	Protection of carnivorous avian survival, growth, and reproduction due to uptake of chemicals in sediment and prey items.	1) Does exposure to chemicals in sediment and/or prey items adversely affect the survival, growth, and reproduction of a first order carnivore? 2) Does sediment-to-biota BSAF suggest uptake or bioaccumulation?	Average and 95% UCL sediment concentrations do not exceed screening criteria.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in sediment to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.
	Green heron	Protection of carnivorous avian survival, growth and reproduction due to uptake of chemicals in prey items.	1) Does exposure to chemicals in prey items adversely affect the survival, growth, and reproduction of a second order carnivore? 2) Does sediment-to-biota BSAF suggest bioaccumulation?	Average and 95% UCL sediment concentrations do not exceed screening criteria.	1) Comparison of average and 95% UCL concentration for each compound measured at the Site in sediment to receptor-specific screening level based on NOAELs available in the literature. 2) Evaluate compound's ability to bioconcentrate.

Notes:

SLERA -- Screening-Level Ecological Risk Assessment

BAF -- biota accumulation factor

BSAF -- biota to sediment accumulation factor

NOAEL -- no observable adverse effects level

95% UCL -- 95 percent upper confidence limit on the mean

ERL -- Effects Range Low

TABLE 20
BACKGROUND COMPARISONS

HYPOTHESIS TESTED: ARE SITE DATA STATISTICALLY DIFFERENT THAN BACKGROUND DATA? ⁽¹⁾							
CHEMICAL OF INTEREST*	SOUTH SURFACE SOIL	SOUTH SOIL	NORTH SURFACE SOIL	NORTH SOIL	ICWW SEDIMENT	WETLANDS SEDIMENT	POND SEDIMENT
Aluminum	NA	NA	NA	NA	Yes*	NA	NA
Antimony	No	No	No	No	Yes*	No	No
Arsenic	No	No	No	No	Yes*	No	Yes*
Barium	No	No	Yes*	Yes*	No	Yes*	No
Beryllium	NA	NA	NA	NA	Yes*	NA	NA
Boron	NA	NA	NA	NA	Yes*	NA	NA
Cadmium	No	No	Yes	Yes*	NA	Yes	Yes
Chromium	No	No	No	No	NA	No	No
Cobalt	NA	NA	NA	NA	Yes*	NA	NA
Copper	Yes	No	No	No	No	No	No
Iron	NA	NA	NA	NA	No	NA	No
Lead	Yes	No	No	No	No	No	Yes
Lithium	Yes*	Yes*	Yes*	No	Yes*	No	No
Manganese	Yes*	Yes*	No	No	No	No	Yes
Mercury	No	No	Yes*	Yes*	No	No	NA
Molybdenum	Yes	No	No	No	No	No	Yes*
Nickel	NA	NA	NA	NA	No	NA	NA
Strontium	NA	NA	NA	NA	Yes*	NA	NA
Titanium	NA	NA	NA	NA	Yes*	NA	NA
Vanadium	NA	NA	NA	NA	Yes*	NA	NA
Zinc	Yes	No	No	No	No	No	No

Notes:

⁽¹⁾ Detailed statistical procedures are outlined in Section 2.7 and calculations are provided in Appendix B.

* Statistical difference is due to background being greater than site.

+ Chemicals of interest are any chemical measured in at least one sample.

NA - No analysis was performed for compound in background.

TABLE 21
COPECS IDENTIFIED IN STEP 1 AND QUANTITATIVELY EVALUATED IN STEP 2

SOUTH AREA SOIL	NORTH AREA SOIL	BACKGROUND AREA SOIL	ICWW SEDIMENT	BACKGROUND ICWW SEDIMENT	WETLAND SEDIMENT	POND SEDIMENT	ICWW SURFACE WATER	BACKGROUND ICWW SURFACE WATER	WETLAND SURFACE WATER	POND SURFACE WATER
2-Methylnaphthalene* 4,4'-DDD+ 4,4'-DDE+ 4,4'-DDT+ Acenaphthene* Acenaphthylene* Anthracene* Antimony Aroclor-1254+ Arsenic Barium Benzo(a)anthracene* Benzo(a)pyrene* Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Boron Cadmium+ Chromium+ Chrysene* Cobalt Copper+ Dibenz(a,h)anthracene* Diendrin+ Endrin Aldehyde+ Endrin Ketone+ Fluoranthene* Fluorene* gamma-Chlordane+ Indeno(1,2,3-cd)pyrene* Lead+ Lithium Manganese Mercury+ Molybdenum Naphthalene* Nickel+ Phenanthrene* Pyrene* Vanadium Zinc+ LPAH* HPAH* TOTAL PAHs*	2-Methylnaphthalene* 4,4'-DDE+ 4,4'-DDT+ Acenaphthene* Acenaphthylene* Anthracene* Antimony Aroclor-1254+ Barium Benzo(a)anthracene* Benzo(a)pyrene* Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Chrysene* Copper+ Fluoranthene* Indeno(1,2,3-cd)pyrene* Lead+ Lithium Manganese Mercury+ Phenanthrene* Pyrene* Zinc+ LPAH* HPAH* TOTAL PAHs*	Antimony Barium Benzo(a)anthracene* Benzo(a)pyrene* Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Cadmium+ Chromium+ Chrysene* Copper+ Fluoranthene* Indeno(1,2,3-cd)pyrene* Lead+ Lithium Manganese Mercury+ Phenanthrene* Pyrene* Zinc+ LPAH* HPAH* TOTAL PAHs*	2-Methylnaphthalene* 4,4'-DDT+ Acenaphthene* Anthracene* Benzo(a)anthracene* Benzo(a)pyrene* Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Chrysene* Copper+ Dibenz(a,h)anthracene* Fluorene* gamma-Chlordane+ Hexachlorobenzene+ Indeno(1,2,3-cd)pyrene* Mercury+ Nickel+ Phenanthrene* Pyrene* Zinc+ LPAH* HPAH* TOTAL PAHs*	4,4'-DDT+ Arsenic Benzo(b)fluoranthene* Copper+ Mercury+ Nickel+ Zinc+ HPAH* TOTAL PAHs*	2-Methylnaphthalene* 4,4'-DDT+ Acenaphthene* Acenaphthylene* Anthracene* Arsenic Benzo(a)anthracene* Benzo(a)pyrene* Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Cadmium+ Chrysene* Copper+ Nickel+ Pyrene* Zinc+ HPAH* TOTAL PAHs* Copper+ Dibenz(a,h)anthracene* Endosulfan Sulfate Endrin Aldehyde+ Endrin Ketone+ Fluoranthene* Fluorene* gamma-Chlordane+ Indeno(1,2,3-cd)pyrene* Lead Mercury+ Nickel+ Phenanthrene* Pyrene* Zinc+ LPAH* HPAH* TOTAL PAHs*	4,4'-DDD+ 4,4'-DDT+ Benzo(b)fluoranthene* Benzo(g,h,i)perylene* Benzo(k)fluoranthene* Cadmium+ Chrysene* Copper+ Nickel+ Pyrene* Zinc+ HPAH* TOTAL PAHs*	Selenium (dissolved)+	4,4'-DDD (total)+ 4,4'-DDT (total)+ Silver (dissolved)	Acrolein (total) Copper (dissolved) Mercury (total)+	Selenium (total)+ Silver (dissolved) Thallium (total and dissolved)+

Notes:
Bold compounds were retained for further evaluation because their maximum measured concentrations exceeded their screening level.
* Compound was retained for further evaluation because it is a PAH that was measured above the detection limit and at least one other PAH was detected above the screening level for that media.
* Compound was retained for further evaluation because it is considered bioaccumulative in the given media by TCEQ Table 3-1 (TCEQ, 2006).
Shaded compounds have a maximum concentration measured above the mid-point between the TCEQ Protective Concentration Limit and Second Effects Level for sediment.

TABLE 22
TERRESTRIAL EXPOSURE PARAMETERS

PARAMETER	Deer Mouse		Coyote		Least Shrew		American Robin		Red-Tailed Hawk	
	Value	Reference	Value	Reference	Value	Reference	Value	Reference	Value	Reference
Ingestion Rate for soil (kg/day)**	5.68E-05	EPA, 2009a*	1.30E-02	EPA, 2009a*	1.09E-04	EPA, 2009a	8.58E-04	EPA, 2009a*	1.13E-03	EPA, 2009a*
Bioavailability Factor in soil (unitless)	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997
Area Use Factor (unitless)	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997	1	EPA, 1997
Body Weight (kg)	1.48E-02	EPA, 1999	1.55E+01	EPA, 1993	4.00E-03	Davis and Schmidly, 2009	8.00E-02	EPA, 1999	9.60E-01	EPA, 1999
Ingestion Rate for food (kg/day)**	2.84E-03	EPA, 1993*	6.54E-01	EPA, 1993*	1.36E-03	EPA, 1993*	1.65E-02	EPA, 1993*	5.70E-02	EPA, 1993*
Dietary Fraction for arthropods (unitless)	1.00E-01	EPA, 2009a	NA		9.00E-01	EPA, 2009a	4.60E-01	EPA, 1993	NA	
Dietary Fraction for plants, etc. (unitless)	9.00E-01	EPA, 2009a	NA		1.00E-01	EPA, 2009a	8.00E-02	EPA, 1993	NA	
Dietary Fraction of small mammals (unitless)	NA		7.50E-01	EPA, 1993	NA		NA		7.85E-01	EPA, 1993
Dietary Fraction of birds (unitless)	NA		2.50E-01	EPA, 1993	NA		NA		2.15E-01	EPA, 1993
Dietary Fraction of earthworms (unitless)	NA		NA		NA		4.60E-01	EPA, 1993	NA	

Notes:

* Normalized for body weight.

NA - not applicable.

** Expressed in dry weight.

Soil ingestion rates are 2% of dietary intake for the deer mouse, coyote, and red-tailed hawk, and 5.2% for the American robin and 8% for the Least shrew per EPA, 2009a.

TABLE 23
ESTUARINE WETLAND AND AQUATIC EXPOSURE PARAMETERS

PARAMETER	Sandpiper		Green Heron	
	Value	Reference	Value	Reference
Ingestion Rate for soil (kg/day)**	4.33E-04	EPA, 1993	6.42E-04	EPA, 2009a
Bioavailability Factor in soil (unitless)	1	EPA, 1997	1	EPA, 1997
Area Use Factor (unitless)	1	EPA, 1997	1	EPA, 1997
Body Weight (kg)	2.15E-01	Dunning, 1993	3.75E-01	Dunning, 1993
Ingestion Rate for food (kg/day)**	2.17E-02	EPA, 1993	3.21E-02	EPA, 1993
Dietary Fraction for invertebrates (unitless)	NA		NA	
Dietary Fraction for worms (unitless)	6.00E-01	Prof. Judg.*	NA	
Dietary Fraction of crabs (unitless)	4.00E-01	Prof. Judg.*	2.50E-01	Kent, 1986
Dietary Fraction of fish (unitless)	NA		7.50E-01	Kent, 1986

Notes:

* Because of the lack of information on dietary fractions for different species, best professional judgment was used as the basis for the assumption.

NA - not applicable.

** Expressed in dry weight.

TABLE 24
ECOLOGICAL HAZARD QUOTIENTS EXCEEDING ONE FOR SOIL

MEDIA	RECEPTOR	CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	TOXICITY VALUE	AVERAGE HQ	RME HQ
South Area Soil	Earthworm	4,4'-DDD	NOAEL	0.2	1.2
		Zinc	NOAEL	3.6	6.8
	Least Shrew	Antimony	NOAEL	0.8	1.3
		Aroclor-1254	NOAEL	0.5	1.8
	American Robin	Zinc	NOAEL	1.1	2.2
		Zinc	NOAEL	0.8	1.4
North Area Soil	Earthworm	Zinc	NOAEL	2	14.9
	Deer Mouse	Antimony	NOAEL	0.5	1.5
	Least Shrew	Antimony	NOAEL	1.2	3.5
		Zinc	NOAEL	0.6	4.7
	American Robin	Zinc	NOAEL	0.5	3.43
		Zinc	NOAEL	0.5	3.43
Background Area Soil	Earthworm	Barium	NOAEL	1	1.5
		Zinc	NOAEL	2.1	8.1
	Least Shrew	Antimony	NOAEL	0.8	1.7
		Zinc	NOAEL	0.6	2.5
	American Robin	Barium	NOAEL	1	1.4
		Zinc	NOAEL	0.4	1.7

Notes:

HQ - hazard quotient

NOAEL - no observable adverse effects level

RME - reasonable maximum exposure

TABLE 25
ECOLOGICAL HAZARD QUOTIENTS EXCEEDING ONE FOR SEDIMENT

MEDIA	RECEPTOR	CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	TOXICITY VALUE	AVERAGE HQ	RME HQ	
Intracoastal Waterway Sediment	Capitella Capitata	4,4'-DDT	ERL	0.4	2.3	
		Benzo(a)anthracene	ERL	0.2	1.2	
		Dibenz(a,h)anthracene	ERL	0.7	3.2	
		Fluorene	ERL	0.6	1.3	
		gamma-Chlordane	ERL	0.6	1.1	
		Hexachlorobenzene	AET	1.7	2.1	
		Phenanthrene	ERL	0.31	1.6	
		HPAH	ERL	0.5	2.2	
		Total PAHs	ERL	0.2	1.1	
			Dibenz(a,h)anthracene	midpoint ERL/ERM	0.3	1.3
Background Intracoastal Waterway Sediment		none				
Wetlands Sediment	Capitella Capitata	2-Methylnaphthalene	ERL	0.35	1.7	
		4,4'-DDT	ERL	1	2.2	
		Acenaphthene	ERL	1.2	4	
		Acenaphthylene	ERL	0.7	3.8	
		Anthracene	ERL	0.3	1.5	
		Benzo(a)anthracene	ERL	0.2	1.2	
		Benzo(a)pyrene	ERL	0.2	1.1	
		Benzo(g,h,i)perylene	AET	0.3	1.1	
		Chrysene	ERL	0.6	3.2	
		Dibenz(a,h)anthracene	ERL	3.2	17.4	
		Endrin Aldehyde	ERL	0.4	1.6	
		Fluoranthene	ERL	0.2	1.1	
		Fluorene	ERL	1	3.4	
		gamma-Chlordane	ERL	0.8	1.7	
		Indeno(1,2,3-cd)pyrene	AET	0.3	1.3	
		Phenanthrene	ERL	0.3	1.8	
		Zinc	ERL	0.9	1.6	
		LPAH	ERL	0.4	1.8	
		HPAH	ERL	0.8	3.9	
		Total PAHs	ERL	0.4	1.9	
			Dibenz(a,h)anthracene	midpoint ERL/ERM	1.3	6.8
			HPAH	midpoint ERL/ERM	0.2	1.2
			Dibenz(a,h)anthracene	ERM	0.8	4.2
Pond Sediment	Capitella Capitata	4,4'-DDT	ERL	--	1.6*	
		Zinc	ERL	2.2	6.7	
		Zinc	midpoint ERL/ERM	1.2	3.6	
		Zinc	ERM	0.8	2.4	
	Sandpiper Green Heron	Zinc	NOAEL	0.4	1.3	
		Zinc	NOAEL	0.4	1.3	

Notes:

* Maximum concentration measured. Only measured once in eight samples.

ERL - effects range low, referred to in figures as the Protective Concentration Limit (PCL)

ERM - effects range medium, referred to in figures as Second Effects Level (SEL)

AET - apparent effects threshold

HQ - hazard quotient

NOAEL - no observable adverse effects level

RME - reasonable maximum exposure

PAH - polynuclear aromatic hydrocarbon

LPAH - low-molecular weight PAH

HPAH - high-molecular weight PAH